Attachment 3

Coachella Valley Integrated Regional Water Management Planning Grant Proposal

Work Plan

Attachment 3 consists of the following items:

- ✓ **Work Plan**

The work plan below describes the process the Coachella Valley IRWM Region has taken to move forward with our IRWM Plan. An outline is detailed below:

Background

A. Regional Water Management Group
B. Coachella Valley IRWM Region
C. IRWM Plan Development
D. Stakeholder Identification and Outreach
E. Disadvantaged Communities
F. Water-Related Objectives and Conflicts
G. Regional Priorities
H. Data and Technical Analysis
I. Resource Management Strategies
J. Plan Implementation
K. Current IRWM Plan Standards

Work Plan Content

Task 1: Ongoing Outreach
- Task 1-1: CVRWMG Program Management
- Task 1-2: Planning Partners Coordination
- Task 1-3: DAC Outreach and Technical Support
- Task 1-4: Tribal Outreach and Coordination
- Task 1-5: Public Involvement

Task 2: Technical Evaluations
- Task 2-1: DAC Water Quality Evaluation
- Task 2-2: Salt and Nutrient Management Planning Strategy
- Task 2-3: Integrated Flood Management Planning
- Task 2-4: Groundwater Elevation Monitoring Strategy

Task 3: IRWM Plan Update
- Task 3-1: Refine Plan Goals, Objectives, and Priorities
- Task 3-2: Evaluate and Report Plan Performance
- Task 3-3: Climate Change Analysis
- Task 3-4: Update Implementation Framework
- Task 3-5: Prepare IRWM Plan Update

The Coachella Valley Integrated Regional Water Management (IRWM) Region is committed to moving forward with a collaborative water management process as is evident in the region's Memorandum of Understanding (MOU) (refer to Attachment 1). The IRWM Plan currently under development is a strong and meaningful first step in coordinating the activities of local water retailers, wastewater and recycled water managers, flood managers, land use planners, and other stakeholders. However, additional work needs to be completed in order to fully realize the regional benefits offered by integrated planning.

The ***Background*** provides an overview and understanding of the Coachella Valley IRWM Region, our stakeholders, and our emerging IRWM Plan. The ***Work Plan*** provides a detailed scope of work for the stakeholder outreach, technical evaluations, and Plan Update activities that will further improve and fortify IRWM planning within the region.

Background

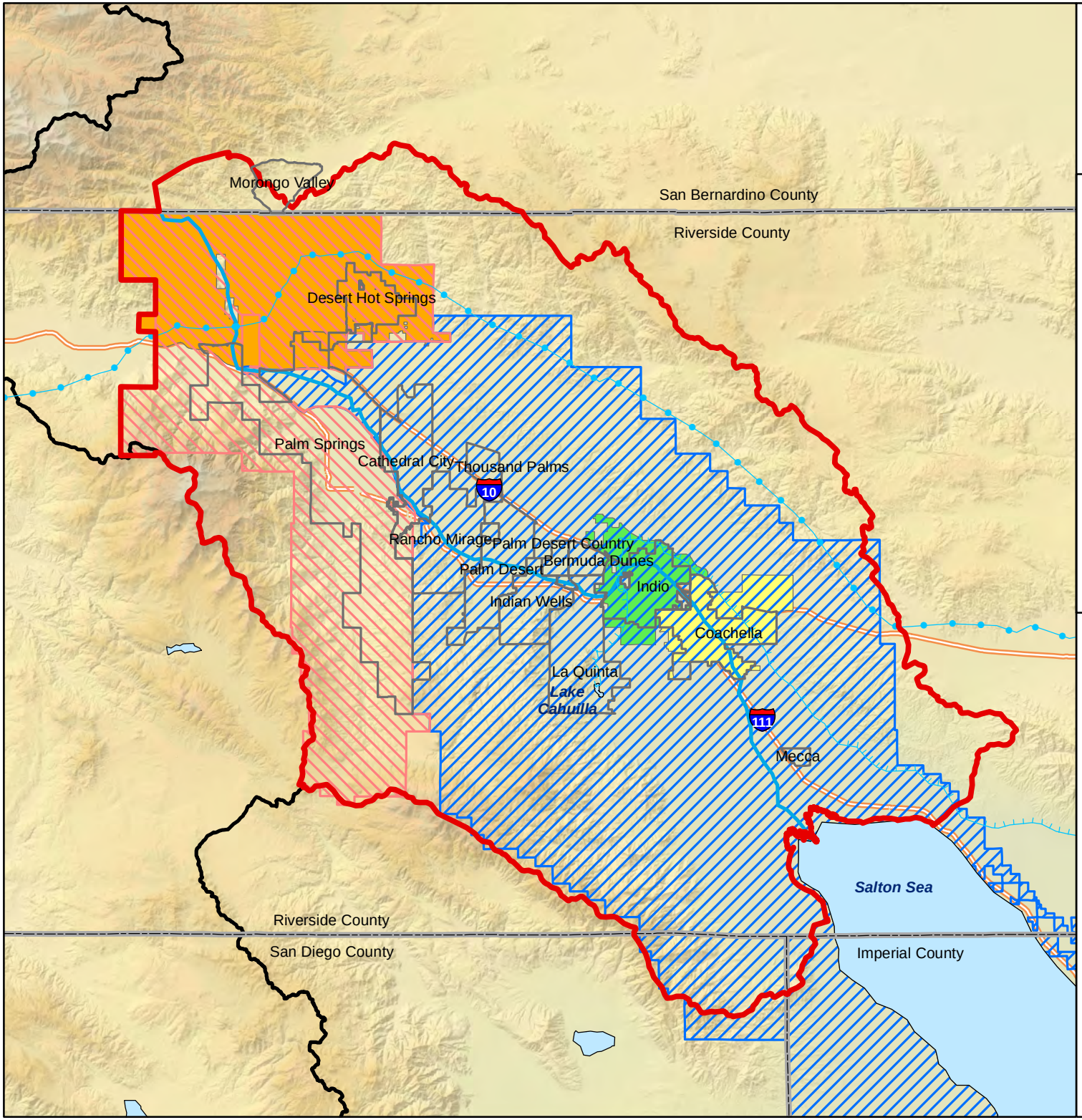
This Background Setting provides a history and evolution of the IRWM planning process in the Coachella Valley IRWM Region.

A. Regional Water Management Group

The Coachella Valley IRWM program is led by the Coachella Valley Regional Water Management Group (CVRWMG), whose purpose is to coordinate water resource management efforts and to enable the Coachella Valley region to apply for grants tied to DWR's IRWM Grant Program. The CVRWMG is a partnership composed of the five Coachella Valley water purveyors (see Figure 1). Each of the water purveyors and their statutory authority over water is described below.

- **Coachella Water Authority (CWA)** is a joint powers authority formed as a component of the City of Coachella and Redevelopment Agency of the City of Coachella. CWA has statutory authority over water supply.
- **Coachella Valley Water District (CVWD)** is a public agency of the State of California organized and operating under County Water District Law, California Water Code §30000, *et seq.*, and Coachella District Merger Law, Water Code §33100, *et seq*. CVWD is a State Water Project contractor and Colorado River contractor empowered to import water supplies to its service area. CVWD has statutory authority over water supply.
- **Desert Water Agency (DWA)** is an independent special district created by a special act of state legislature contained in Chapter 100 of the appendix of the California Water Code. DWA is also a State Water Project contractor empowered to import water supplies to its service area, replenish local groundwater supplies, and collect assessments necessary to support a groundwater replenishment program as provided for in the Desert Water Agency Law. DWA has statutory authority over water supply.
- **Indio Water Authority (IWA)** is a joint powers authority formed as a component of the City of Indio and Redevelopment Agency of the City of Indio. IWA has statutory authority over water supply.
- **Mission Springs Water District (MSWD)** is a County Water District formed under Section 30000 *et seq*. of the California Water Code. MSWD has statutory authority over water supply.

Description of the CVRWMG was included in the approved Region Acceptance Process submittal and will be provided in *Chapter 1, Introduction* of the IRWM Plan under development. ***Section C, IRWM Plan Development*** (below) provides a detailed outline of the IRWM Plan. The CVRWMG governing bodies anticipate adoption of the inaugural Coachella Valley IRWM Plan in December 2010.



Jurisdictional Boundary of the Five Coachella Valley Regional Water Management Group Agencies

Figure 1

- Colorado River Aqueduct
- Coachella and All American Canals
- Whitewater River Stormwater Channel
- Interstate Hwys.
- Colorado River and its Lakes
- Lakes
- City
- Coachella Valley IRWM Region
- Colorado River Funding Area
- Indio Water Agency
- Mission Springs Water Agency
- Coachella Water Agency
- Coachella Valley Water District
- Desert Water Agency

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Department: RMC Water & Environment

The five partners signed an MOU in September 2008 for the purpose of coordinating water resources planning activities and developing and adopting an IRWM Plan (refer to Attachment 1). Members of CVRWMG articulated their intent in Section 3 of the MOU:

> *"3.1.1 This MOU is to memorialize the intent of the Partners to coordinate and share information concerning water supply planning programs and projects and other information, and to improve and maintain overall communication among the Partners involved. It is anticipated that coordination and information sharing among the Partners will assist the agencies in achieving their respective missions to the overall well-being of the region."*

These water agencies have historically not worked collaboratively on water management and, until recently, have been enmeshed in lawsuits with one another over various water management topics. The process of bringing these entities together into the CVRWMG took nearly two years of negotiations. Through that process, a measure of trust and cooperation has developed between these agencies, culminating in their willingness to prepare an initial IRWM Plan without the financial assistance of DWR. Going forward, it is critical that the CVRWMG continue to collaborate on the technical work products contained in this Work Plan a build on the trust and cooperation that has been achieved.

B. Coachella Valley IRWM Region

The Coachella Valley is a unique area of the State that is undergoing a number of water resource challenges. While a great deal of regional planning has taken place in the region, there is significant ongoing need to better integrate water management planning and to meet the new challenges.

The Coachella Valley IRWM region is chiefly the same as the Whitewater River watershed, also known as the Coachella Valley (refer to Figure 1). The region's watershed boundaries to the north and west are the rugged, barren mountain ranges of the Colorado Desert, San Bernardino Mountains, Little San Bernardino Mountains, and Mecca Hills. The watershed boundaries to the east are Mortmar, the Salton Sea, and Travertine Rock. The eastern boundary is defined by the watershed that encloses all surface drainage emptying into the north end of the Salton Sea. The Salton Sea is not within the IRWM region. The watershed boundaries to the south and west are the high precipitous Santa Rosa Mountains and San Jacinto Mountains, which create an effective barrier against the easterly moving coastal storms. The western boundary is composed of a political line that separates DWA and MSWD from San Gorgonio Pass Water Agency.

Coachella Valley is located in the southeast corner of Riverside County. The Coachella Valley IRWM region is about 65 miles long on a northwest-southeast trending axis and covers approximately 440 square miles. The area is drained primarily by the Whitewater River that flows southward to the Salton Sea at an elevation of approximately 220 feet below sea level. The Coachella Valley is characterized by low precipitation and high summer daytime temperatures. Water bodies in the Coachella Valley include the Salton Sea, Whitewater River, and a collection of small streams and creeks.

The Coachella Valley is comprised of nine city jurisdictions and unincorporated areas with a total population of approximately 448,040. The largest city is Indio with a population of 70,000 (U.S. Census Bureau 2006-08 Community Survey). In spite of its dry conditions and intense temperatures, the Coachella Valley generates $576M worth of crop value annually through its agricultural sector. Coachella Valley is known for producing a variety of fruits and vegetables, but most notably famous for dates and the origination of the Coachella grapefruit. Coachella Valley's underground aquifer has allowed extensive economic growth. Widespread water availability through aquifer pumping has supported high caliber golf and country clubs making Coachella Valley a premier destination for both golf and tourism; tourism has become major contributor to regional revenue.

The Coachella Valley region needs integrated regional water management because of its geologic proximity, interconnected economies and inclusion within the Whitewater River watershed. The selected

regional boundary falls under the Colorado River Basin Regional Water Quality Control Board jurisdiction, multiple political authorities, and several water purveyors.

A detailed description of the Coachella Valley IRWM region will be included in Chapter *2, Region Description* of the IRWM Plan under development.

Watershed

The Whitewater River watershed is situated within the Coachella Valley region boundaries. The watershed is defined by the Whitewater Hydrologic Unit as described in the Water Quality Control Plan for the Colorado River Basin RWQCB (Basin Plan). The Whitewater hydrologic unit is described by the U.S. Geological Survey (USGS) as being 1.5 miles north of Whitewater and 3.5 miles upstream from San Gorgonio River. The drainage area of the watershed is approximately 57.5 mi^2.The watershed consists of sparsely populated mountains, desert, and agricultural lands. The Whitewater River is the primary drainage course in the area, spanning the region. The river has perennial flow in the north, becoming dry as water percolates the groundwater basin or is diverted for use. The river is fed by several tributaries, including the Box Canyon Wash. The channel also carries stormwater and agricultural runoff and supports some riparian vegetation and marsh habitat at the north end of the Salton Sea.

Groundwater

Groundwater is the largest source of water supply for the Coachella Valley IRWM region, especially in the West Valley but has been tremendously depleted and still remains in overdraft today. The Coachella Valley Groundwater Basin has an estimated storage capacity of 39 million acre-feet of water. It is divided into several basins, the largest of which are the Upper and Lower Whitewater River Subbasins. Multiple subbasins were formed by the large and active faults that make up the San Andreas Fault system (see Figure 2). Basin inflows include natural recharge by mountain runoff, artificial recharge with Colorado River water, flows from outside the groundwater basin, return flows from irrigation (largest inflow according to Bulletin 118), and non-consumptive return. Basin outflows include groundwater pumping (largest outflow according to Bulletin 118), evapotranspiration, flows to the Salton Sea, and flows to subsurface drains (which also flow to the Salton Sea).

Almost all domestic water served by the local water purveyors is obtained locally from wells drilled into the Coachella Valley's vast groundwater basin. All five CVRWMG water purveyors, Myoma Dunes Mutual Water Company, and other pumpers share the basin. Average pumping by water purveyor is as follows (CVRWMG 2009 RAP; IWA 2010 UWMP; MSWD 2005 UWMP):

- CVWD: 132,000 AFY from 115 wells
- DWA: 38,700 AFY from 27 wells
- IWA: 23,400 AFY from 21 wells
- MSWD: 9,200 AFY from 14 wells
- CWA: 8,400 AFY from 8 wells

Prior to 1949, water levels steadily declined because of pumping. From 1950 to the early 1980s, water levels in the central and southern subbasin area rose as imported Colorado River water begin to recharge parts of the subbasin. However, since the 1980s, water levels in the central and southern areas have declined despite Colorado River imports. These declines are largely due to increasing urbanization and groundwater pumping. CVWD (2000) estimates the decrease in freshwater in storage in the Coachella Valley Groundwater Basin for 1999 to be 136,700 acre-feet, of which the Indio subbasin is largest.

Whitewater River Watershed and Other Water Features

Figure 2

- Recharge Area
- Colorado River Aqueduct
- Coachella and All American Canals
- Whitewater River Stormwater Channel
- River or Creek
- Interstate Hwys.
- Colorado River and its Lakes
- Lakes
- Dry Lakes
- Whitewater River Watershed
- Colorado River Funding Area
- Coachella Valley IRWM Region

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Made By: DNF
Department: RMC Water & Environment

Recharge Areas

Because groundwater has been depleted in the Coachella Valley, both natural and artificial recharge are critical solutions to trying to bring the groundwater basin into balance. Recharge to the groundwater basin is attributed to surface runoff and subsurface inflow. Natural recharge in the area is estimated to be only a fraction of the annual pumping – about 50,000 AFY. The bulk of groundwater recharge takes place through artificial means (CVWD 2002). There are four recharge areas in the Coachella Valley IRWM region (see Figure 2 and Table 1):

- **Whitewater Spreading Area** artificially recharges stormwater and SWP water, with historical peak recharge of 288,000 acre-feet in 1986,
- **Mission Creek Spreading Facility** recharges Colorado River water and has a recharge capacity of 30,000 to 40,000 AFY,
- **Thomas E. Levy (Dike No. 4) Recharge Facility** recharges water obtained from the Coachella Canal and has a recharge capacity of about 40,000 AFY, and
- **Martinez Canyon Pilot Recharge Project** recharges Coachella Canal water and currently has capacity of about 2,000 AFY.

SWP and Colorado River allotments delivered by the Colorado River Aqueduct and the Coachella Canal help reduce the Coachella Valley Groundwater Basin overdraft. These recharge facilities provide conjunctive use opportunities with other agencies.

Whitewater Spreading Area at Windy Point

Finally, several of the local wastewater treatment and reclamation facilities discharge effluent to percolation ponds (see Table 1). CVWD and the City of Palm Springs discharge secondary treated recycled water to percolation ponds in the West Valley when the demand for recycled water is low in winter months, while MSWD discharges secondary treated effluent to percolation ponds for final disposal. In the East Valley, CVWD, CWA, and Valley Sanitary District discharge secondary treated effluent which has been chlorinated and then dechlorinated to the Coachella Valley Stormwater Channel.

Table 1: Groundwater Subbasins and Corresponding Recharge Areas

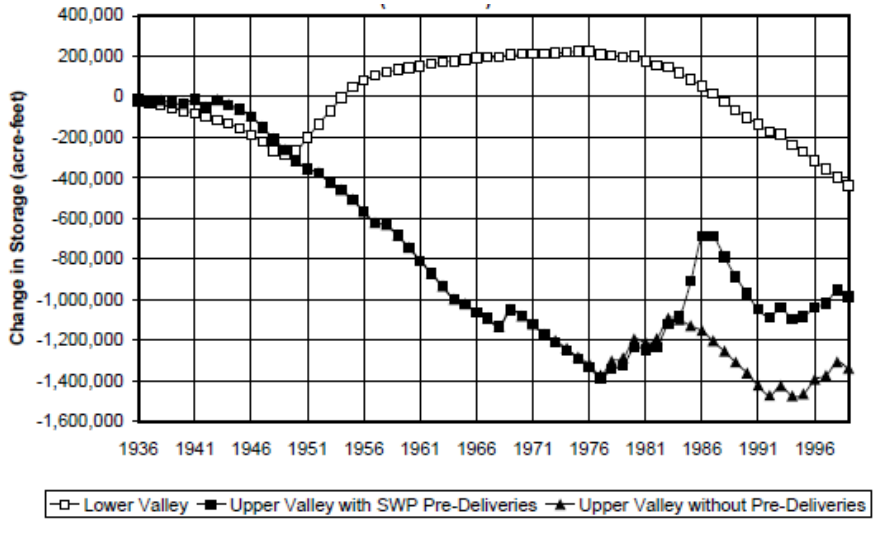
Subbasins	Recharge Areas
Fargo Canyon Sub Area	N/A
Garnet Hill Subarea	Being Studied
Miracle Hill Sub Area	Horton WWTP Desert Crest WWTP
Mission Creek Subbasin	Mission Creek Recharge Area
Oasis Sub Area	Thomas E. Levy Recharge Area Martinez Canyon Pilot Recharge
Palm Springs Sub Area	Whitewater Recharge Area
San Gorgonio Pass Subbasin	Whitewater Recharge Area
Sky Valley Sub Area	N/A
Thermal Sub Area	N/A
Thousand Palms Sub Area	N/A

Overdraft Conditions

Despite the large amount of artificial groundwater recharge, the local groundwater basin has not been in balance since the early 1900's. The overdraft was estimated to be about 137,000 AFY in 1999, with a cumulative overdraft of nearly 4.8 million acre-feet between 1936 and 1999 (CVWD 2002 WMP). This means that 4.8 million more acre-feet of freshwater were withdrawn from the basin than was recharged. Figure 3 presents the cumulative change in storage, which generally mimics water level changes, in the West (Upper) and East (Lower) Valleys since 1936.

Groundwater overdraft has caused groundwater levels to decrease more than 60 feet in portions of the East Valley and raised significant concern about water quality degradation and land subsidence in this area. Recently, however, reduced pumping in the East Valley along with recharge at the Thomas E. Levy Facility has resulted in a return to artesian flow in the vicinity of Mecca. Groundwater levels in the West Valley have decreased substantially, except in the areas near the Whitewater Spreading Facility where artificial recharge has successfully raised water levels.

Figure 3: Cumulative Change in Groundwater Basin Storage (1936-1999)



Source: CVWD 2002 WMP

Continued overdraft would have significant consequences for the Coachella Valley, including:

- increased costs to pump water and deepen wells;
- land subsidence in some areas with resultant potential for ground fissures and damage to buildings, homes, sidewalks, streets, wells, and buried pipelines; and
- water quality degradation in some areas, which includes increased salinity from Salton Sea intrusion and perched water intrusion.

Imported Water

Although Coachella Valley has access to a vast aquifer, the region has an active imported water program to protect and replenish groundwater supplies. CVWD and DWA obtain imported water supplies through two primary sources: 1) State Water Project (SWP) supply via exchange with Metropolitan Water District of Southern California (MWD) for supply from the Colorado River Aqueduct and 2) Colorado River supply via the Coachella Canal. Because of the region's unique connection to both SWP and Colorado River supplies, CVWD and DWA are continually seeking new opportunities for imported water transfers and exchanges from SWP contractors and other sources.

State Water Project Supply via Colorado River Aqueduct

CVWD and DWA are SWP contractors and receive imported water supplies through exchange agreements with MWD. Since CVWD and DWA have no direct physical connection to SWP water, their exchange agreements allow for the agencies to take their allocation of SWP water from MWD's Colorado River Aqueduct instead.

In 1973, CVWD and DWA entered into their first Exchange Agreement with MWD for delivery of SWP water to replenish groundwater in the Whitewater River Subbasin of the Upper Coachella Valley Groundwater Basin. The same agencies executed an Advance Delivery Agreement in 1983, which allowed MWD to store up to 600,000 acre feet of water in the Whitewater River Subbasin. The agreement was updated in 2003. MWD assigned 11,900 acre feet of its annual Table A allocation to DWA and 88,100 acre feet of its annual Table A allocation to CVWD for a total allocation of 100,000 acre feet; however, MWD retained the option to call-back or recall the assigned water allocations.

CVWD and DWA executed the Mission Creek Groundwater Replenishment Agreement in April 2003, which also allowed for storage of advanced deliveries from MWD. CVWD, MSWD, and DWA are currently working together on development of a Mission Creek-Garnet Basin Groundwater Management Plan to address subbasin issues.

CVWD and DWA have also been actively acquiring additional Table A allocation to their respective SWP Table A allotments. The combined CVWD and DWA Table A allotment is 194,100 AFY.

MWD's Colorado River Aqueduct originates near Parker Dam at Lake Havasu on the Colorado River and terminates at Lake Matthews. It traverses the Coachella Valley IRWM region and has two turnout locations in the Coachella Valley for recharge of the groundwater basins. The first is near Highway 62 at the Mission Creek Spreading Area for recharge of the Mission Creek subbasin. The second is just north of the intersection of the Whitewater River and Interstate 10 for recharge of the aquifer at the Whitewater Spreading Area for recharge of the Whitewater River subbasin.

Colorado River Supply via Coachella Canal

To secure its Colorado River water supplies, CVWD entered into the Quantification Settlement Agreement (QSA) with Imperial Irrigation District, MWD, San Diego County Water Authority, the State of California, and the U.S. Department of the Interior. The QSA enables California to reduce its historic dependence on Colorado River water to its 4.4 million acre-foot basic annual apportionment through agriculture-to-urban water transfers and other water supply programs. The QSA secures CVWD's Colorado River water allotment of 459,000 AFY by 2026.

Coachella Canal

The Coachella Canal originates 20 miles west of Yuma, Arizona at "Drop 1" of the All American Canal and conveys Colorado River water 123 miles northwest along the western boundary of the Coachella Valley IRWM region to a man-made storage reservoir, Lake Cahuilla. The Coachella Canal conveys flow by gravity and is concrete-lined to prevent seepage loss. Along its route, the Coachella Canal distributes non-potable water for irrigation to approximately 73,000 acres of agricultural land in the eastern Coachella Valley through nearly 500 miles of buried delivery laterals. Total agricultural water demand in 1999 was 358,700 AFY, primarily in the Lower Valley. The Coachella Canal also provides non-potable irrigation water to Coachella Valley golf courses. Lake Cahuilla, at the terminus of the Coachella Canal, was built by CVWD in 1968 to provide operational storage for imported Colorado River water.

Surface Water

Surface waters of the Coachella Valley IRWM region consists of the Whitewater River Stormwater Channel (WRSC) and principal tributaries to the WRSC, including the San Gorgonio River, Snow Creek, Falls Creek, Chino Creek, Mission Creek, Morongo Creek, Tahquitz Creek, Palm Canyon Wash, Deep Canyon Creek, and the Palm Valley Channel.

DWA receives about 5% of its potable water supply (or 2,500 AFY) through surface water sources, including Chino Creek, Snow Creek, and Falls Creek. DWA also diverts water from the Whitewater River for irrigation, commercial uses, and groundwater recharge. These creeks are all tributary to the Whitewater River. CVWD also diverts local runoff from the Whitewater River Canyon near Windy Point to the Whitewater Spreading Facility for groundwater recharge.

Wastewater

The Coachella Valley IRWM Region encompasses five sanitation service areas, with a total of eleven wastewater treatment plants. Of the eleven wastewater treatment plants, four of these plants recycle water. Recycled water usage in the Valley has increased from about 500 acre-ft/year in 1965 to more than 14,000 acre-ft/year presently (CVRWMG 2009 RAP). However, some customers in CVWD and MSWD service areas are still on septic systems.

The five sanitation service areas and wastewater treatment facilities that serve Coachella Valley residents include (CVRWMG 2009 RAP; CVWD 2005 UWMP; MSWD 2005 UWMP):

- **City of Coachella** (Coachella Sanitation District) operates a 2.4 million gallons per day (mgd) wastewater treatment plant and discharges effluent to the WRSC.
- **DWA** (partnered with City of Palm Springs) operates an 11 mgd wastewater treatment plant which distributes recycled water for irrigation or to percolation ponds. DWA (partnered with CVWD) operates a sewer collection system in the southeastern area of Cathedral City and discharges to CVWD sewer collection system.
- **CVWD** operates a total of six treatment plants with a total capacity of 30.6 mgd. CVWD operates three water reclamation plants (WRP-7, WRP-9 and WRP-10) which distribute approximately 8 mgd of recycled water. One wastewater treatment plant (WRP-4) discharges effluent to the WRSC. Two small plants (WRP-1 and WRP-2) discharge effluent to percolation ponds.
- **MSWD** operates two wastewater treatment plants (Horton Wastewater Plant and Desert Crest Wastewater Plant) with a combined capacity of 2.7 mgd. Effluent from both plants is discharged to percolation ponds.
- **Valley Sanitary District** (VSD) operates a wastewater treatment plant and discharges effluent to the WRSC. The plant generates 6.5 mgd which is primarily diverted to the Coachella Valley Stormwater Channel.

CVWD's major wastewater treatment facility, the Mid-Valley WRP (WRP-4) located near Thermal, became operational in 1986 and allows the District to serve communities from La Quinta to Mecca. Presently, this plant, along with similar facilities near Palm Desert, Thermal, North Shore, Bombay Beach, and Thousand Palms, allows the District to provide sanitation service to most of the areas that it serves with domestic water.

MSWD operates two plants, the Horton Wastewater Treatment Plant and Desert Crest Wastewater Treatment Plant that provide secondary treated wastewater. The Horton Wastewater Treatment Plant has been expanded four times and its current capacity is 2 mgd. Desert Crest Wastewater Treatment Plant produces much less, in the dry summers the plant can produce as low as 35,000 gallons and in the winter up to 70,000 gallons per day due to reduced population in the hot summer months(MSWD 2010). Both of these wastewater treatment plants distribute water to percolation ponds providing recharge.

VSD's wastewater plant, located in Indio, treats water on a secondary level at a rate of 6.5 mgd. Post-treatment water is diverted to the Coachella Valley Channel and small portions of the treated wastewater are used for neighboring tribal lands and irrigation (VSD 2010).

Many Valley residents, however, are still using septic systems for wastewater treatment. Septic systems have the potential to contaminate the local groundwater basin. MSWD recently approved the formation of a $58 million sewer assessment district (AD12), which is designed to remove existing septic tank systems and finance the costs of additional improvement to the sewer system. Within DWA's service area, the City of Cathedral City has secured grants and assessment districts to fund the costs of septic to sewer conversions for the Dream Home and Cathedral City Cove areas. These projects were completed in summer of 2010.

Recycled Water

Recycled water has been used in the Coachella Valley IRWM region since 1965, mainly for irrigation of golf courses. Water recycling has the potential to provide a reliable non-potable water supply to the Region. Water recycling has the potential to save energy and reduce costs in the region as recycled water production requires only a quarter of the energy necessary to pump groundwater from deep wells. The use of reclaimed water also protects the local water supply by reducing the amount of nitrates which could reach the groundwater basin. At present, recycled water rates are comparable to the costs of pumping groundwater (CVWD 2005 UWMP) because recycled water is heavily subsidized; the actual cost of producing and distributing recycled water is far higher than potable water.

CVWD Recycled Water Pump Station

In the West Valley, municipal wastewater is the only potential source of recycled water. In the East Valley, three sources of recycled water are available for potential use: fish farm effluent (dependent on one fish farming business operations); return flows from the agricultural drains, CVSC and CVWD drains; and municipal recycled water from CVWD and VSD water reclamation plants. The primary use for recycled water in the Coachella Valley IRWM region is golf course irrigation. In winter months, when demand for recycled water is low, wastewater facilities discharge effluent to percolation ponds in lieu of recycling where it eventually becomes part of the groundwater supply.

Recycled water usage has increased from about 500 AFY in 1965 to over 14,000 AFY currently (CVRWMG RAP Submittal 2009). CVWD owns and/or operates three WRPs (WRP-7, WRP-9, and WRP-10) which generate reclaimed water for golf courses, large landscape areas, and groundwater recharge. Flows from the western part of CVWD are generally directed to WRP-9 and WRP-10. The Palm Desert Regional WRPs (WRP-9 and WRP-10) serves the communities of Indian Wells, Palm Desert, and Rancho Mirage as well as a portion of Cathedral City. The Cities of Coachella and Palm Springs, and VSD each operate a WRP. DWA also has a recycling program using sewer effluent from the City of Palm Springs.

Potential uses for recycled water in the region can be divided into five major categories:

- Surface irrigation, especially for golf courses and greenbelt areas;
- Groundwater recharge;
- Impoundments for recreation, fish hatcheries, landscape ponds;
- Cooling for industrial and commercial applications; and

- Other uses, such as toilet flushing, drain trap priming, fire fighting, decorative fountains, commercial laundries, industrial boiler feed, soil compaction, mixing concrete, and dust control on roads and streets.

Currently, CVWD produces about 6,900 AFY of recycled water for irrigation use and approximately 2,000 AFY for in-plant water use. In addition to these users, CVWD delivers Coachella Canal water to a number of golf courses in the Lower Valley. One golf course has been irrigated with recycled water from the Palm Desert Country Club WRP since the early 1960s. DWA produces roughly 3,500 AFY of recycled water for a uses which include irrigation and landscaping.

Water Conservation

All five water purveyors within the Coachella Valley recognize that water is a limited resource and that water conservation and use efficiency should be actively pursued. Each agency implements a variety of irrigation and/or domestic water conservation measures, including model landscape ordinances, buried irrigation distribution pipelines, water-efficient irrigation controls, water efficient plumbing, water-wise landscaping programs, conservation outreach and education, conservation pricing of water rates, and water audits (CVWD 2005 UWMP; DWA 2005 UWMP; IWA 2010, UWMP; MSWD 2005 UWMP). The Valley's water conservation efforts are anticipated to reduce overall water demand by 20 percent by 2020, as mandated by the State.

Stormwater and Flood Management

The mean seasonal precipitation in the Coachella Valley IRWM region ranges from 44 inches in the San Bernardino Mountains to less than 3 inches at the Salton Sea. The region is subject to general storms caused by warm tropical air from coastal regions that result in heavy precipitation over large areas and can last several days. The region is also subject to local thunderstorms that cover smaller areas and result in high-intensity precipitation of short duration.

Riverside County Flood Control and Water Conservation District (RCFCWCD) and CVWD are the Region's flood control districts. They operate and maintain a series of regional flood control facilities throughout the Valley. These facilities drain to the Salton Sea. Local cities and the County of Riverside manage localized urban drainage systems that drain to these facilities. The back bone of this system is the Region's 49-mile Whitewater River/Coachella Valley Stormwater Channel, which carries surface runoff to the Salton Sea. West of Washington Street, it's called the Whitewater River Stormwater Channel (WRSC); east of Washington Street, it's called the Coachella Valley Stormwater Channel (CVSC).

Stormwater Channel

Local cities and the County divert runoff from storm events to the WRSC. The WRSC is the backbone of the region's flood control system and is composed of levees, debris basins, and channels; the channel is designed for the Standard Project Flood of 85,000 cubic feet per second. Three wastewater treatment plants (VSD, Coachella, and WRP-4) also discharge effluent to the WRSC.

CVWD's regional flood control systems consist of a series of debris basins, levees, and stormwater channels that divert floodwaters from the canyons and alluvial fans surrounding the Coachella Valley to the WRSC. Coachella provides local drainage control via a system of storm drains, retention basins and dry wells, some of which discharge to the CVWD's regional flood control system. IWA local drainage control is via a system of storm drains, retention basins, and dry wells.

Flood Channels

The Coachella Valley IRWM region is an arid desert area and is subject to alluvial-fan flash flooding from the surrounding mountain ranges. The backbone of the region's flood control system is the 49-mile Whitewater River/Coachella Valley Stormwater Channel. West of Washington Street, it's called the Whitewater River Stormwater Channel (WRSC); east of Washington Street, it's called the Coachella

Valley Stormwater Channel (CVSC). Local cities and the County divert runoff from storm events to the WRSC. The WRSC is designed for the Standard Project Flood of 85,000 cubic feet per second. Three wastewater treatment plants (VSD, Coachella, and WRP-4) also discharge effluent to the WRSC.

The WRSC is both naturally occurring and man-made. It originates on the slopes of the San Bernardino Mountains and flows generally southeast through the region to the Salton Sea. Downstream of the Indian Wells/La Quinta boundary, the channel was constructed and later improved to convey storm flows to approximately Avenue 52 in Coachella. From Avenue 52 to the Salton Sea, the channel lacks bank stabilization and is in a levee condition meaning that the estimated surface elevation of Standard Project Flood is higher than the elevation of adjacent properties.

CVWD's flood control systems consist of a series of debris basins, levees, and 16 stormwater channels that divert floodwaters from the canyons and alluvial fans surrounding the Coachella Valley to the WRSC. Many of these structures were built or restructured in the 1970s in cooperation with cities and other agencies following severe floods. Coachella provides local drainage control via a system of storm drains, retention basins and dry wells, some of which discharge to the CVWD's regional flood control system. IWA local drainage control is via a system of storm drains, retention basins, and dry wells.

Localized Flood Hazards

Flash Flooding Results in Property Damage

The local area is subject to alluvial-fan flash flooding from the surrounding mountain ranges and severe flooding has been frequently recorded beginning as early as 1825. In the late 70's, severe flood damage occurred to homes and businesses in several of the region's cities. As a result, flood control infrastructure was constructed in the early 1980's with the help of U.S. Army Corps of Engineers (USACE) and local funding. The WRSC and its tributary channels protect the Valley cities from Palm Springs to Coachella from flooding. However, there are still several areas of the Coachella Valley IRWM region that lack flood control facilities and are vulnerable to devastating alluvial and riverine flooding. These include the community of Thousand Palms, the Oasis area, Highway 111 between Palm Springs and Cathedral City, and areas along the CVSC South of Avenue 52. USACE is proposing a system of levees to go east into the Rio del Sole to Warner.

The flood control districts continue to seek funding to protect these areas. USACE is proposing a system of levees in Thousand Palms from Rio De Sol Road to Washington Street. A wide range of regional flood control improvements, including dams, debris basins, and concrete-lined channels, have been constructed throughout the Coachella Valley in an effort to protect life and property from flooding hazards, particularly the 100-year flood. Smaller-scale improvements have been constructed to protect specific neighborhoods and communities from flood flows and to convey mountain runoff to the Whitewater River.

The current lack of flood control in the East Valley prevents higher-density housing from being developed. In the City of Desert Hot Springs, alluvial flooding issues coupled with MSHCP requirements make development very difficult. As there appears to be a relationship between flood control and the ability to accommodate housing growth, the need for affordable housing may help drive flood control projects.

Land Use Agencies

There are 448,040 residents in Coachella Valley as of January 1, 2009 (Wheeler 2010). About 75 percent of Valley residents lived in one of the nine incorporated cities, while the other 25 percent lived in

unincorporated portions of the Valley. Palm Springs and La Quinta are the two largest cities, with respect to land area while Indio and Cathedral City are the most populated of the Coachella Valley Cities each with a population exceeding 52,000 residents. The other seven incorporated cities include Cathedral City, Coachella, Desert Hot Springs, Indian Wells, La Quinta, Palm Desert, and Ranch Mirage.

Eleven community councils are represented within the Coachella Valley. Community councils represent smaller groups of individuals that share a common geographic location (smaller than city councils). Community councils typically agree upon common values and create a tighter social cohesion through collective issues and concerns. Community council boundaries can be within city boundaries or be completely unincorporated. The eleven community councils include Bermuda Dunes, Desert Edge, Desert Palms, Indio Hills, Mecca, North Shore, Oasis, Sky Valley, Thermal, Thousand Palms, and Vista Santa Rosa.

Tribal Lands

Most lands within the Coachella Valley are either private lands, public lands administered by the U.S. Bureau of Land Management, or Native American tribal lands. Major Native American reservation lands include:

- Torres Martinez Desert Cahuilla Indians reservation, Cahuilla
- Cabazon Band of Mission Indians reservation, Indio
- Augustine Band of Cahuilla Indians reservation, Coachella
- Agua-Caliente Band of Cahuilla Indians reservation, Palm Springs
- Twenty-Nine Palms Band of Mission Indians reservation, near Palm Springs

The Torres Martinez and Agua-Caliente reservation are the largest by acre; both are around 24,000 acres in size.

Region Acceptance Process

The IRWM regional boundary was selected because it is all-encompassing and allows for the inclusion of all pertinent agencies and stakeholders interested in water management in the Coachella Valley. The jurisdictional boundary of the Coachella Valley IRWM region was chosen because it includes the service areas of the five CVRWMG partners who will adopt the IRWM Plan. The boundary includes the nine Coachella Valley cities and the eleven Coachella Valley Community Councils that lie within the watershed. The boundary selected also shares a common water supply, wastewater, and flood control infrastructure, making it easier to coordinate and establish regional goals and objectives.

On April 28, 2009, the CVRWMG submitted a Region Acceptance Process application to DWR for establishment of the Coachella Valley IRWM region. DWR approved of the region in November 2009. The Coachella Valley is an appropriate region for integrated planning for the following reasons:

- Regional water supply management has occurred historically between two agencies (DWA and CVWD), but over the years other agencies have shown interest in partnering given that water sources are shared as an interrelated system by multiple agencies within the Coachella Valley.
- The CVRWMG partners recognize that an integrated program will help to meet current and future regional water and wastewater needs.
- With the implementation of an IRWM Plan, a strong collaborative framework could be established for all parties to address key issues related to water resources.

C. IRWM Plan Development

The CVRWMG is highly committed to both the current development and future update of the Coachella Valley IRWM Plan. The IRWM Plan is currently being developed by various stakeholders in collaboration with the CVRWMG, Planning Partners, and consulting team with its development being funded solely by the CVRWMG members without the assistance of outside grants. Table 2 provides a detailed outline of the IRWM Plan under development.

Table 2: Coachella Valley IRWM Plan Outline

IRWM Plan Chapter, Section	IRWM Plan Chapter, Section (cont.)
Glossary of Terms **Executive Summary** **1. Introduction** a. Background b. Coachella Valley Regional Water Management Group c. Overview of Stakeholder Involvement d. IRWM Plan Development **2. Region Description** a. Watershed and Water Systems b. Internal Boundaries c. Water Supplies and Demand d. Water Quality e. Social and Cultural Makeup f. Major Water-Related Objectives and Conflicts g. Neighboring IRWM Efforts h. Climate Change **3. Stakeholder Involvement** a. Stakeholder Composition b. Relation to Local Water Planning c. Relation to Local Land Use Planning **4. Issues and Needs** a. Demand b. Water Supply c. Water Quality d. Flood Management e. Natural Resources f. Special Interest Groups **5. Objectives** a. Goals and Objectives b. Statewide Priorities c. Measuring the Objectives	**6. Resource Management Strategies** a. IRWM Integration Approach b. Resource Management Strategies c. Consideration of Effects of Climate Change **7. Project Evaluation and Prioritization** a. Project Selection Process b. Project Evaluation and Performance c. Regional Priorities **8. Framework for Implementation** a. Governance b. Agency Coordination c. Impacts and Benefits d. Finance e. Data Management f. Technical Analysis g. Plan Performance and Monitoring h. Future IRWM Plan Activities **9. References** **Appendices** A. Memorandum of Understanding B. Stakeholder Meeting Materials C. Public Outreach and Communication Plan D. Master IRWM Plan Project List (dated November 1, 2010) E. Prioritized Project List F. High Priority Project Descriptions (for Proposition 84 Grant Proposal) G. Letters of Support H. Comments Received on Public Review Draft IRWM Plan

The overall direction and development of the IRWM Plan has been provided by the CVRMWG and Planning Partners. The CVRMWG have been assisted in preparing plan documents by RMC Water and Environment and Integrated Planning and Management, Inc. The CVRWMG governing bodies are

expected to adopt the inaugural Coachella Valley IRWM Plan at their regularly scheduled Board meetings in December 2010.

Through a series of meetings and public workshops that began in April 2010, Coachella Valley stakeholders have completed a tremendous amount of work in a short amount of time. Table 3 provides an overview of the work completed to date.

Table 3: Work Completed To Date on Coachella Valley IRWM Plan

Planning Task	Completed	Date
Identification of water resource needs, issues, and conflicts	✓	May 2010
Refinement and expansion of the region description	✓	June 2010
Development of regional goals and objectives	✓	July 2010
Establishment of a stakeholder outreach and involvement process	✓	May 2010
Identification of water management projects that contribute to attainment of the Plan objectives	✓	August 2010
Review and consideration of resource management strategies relevant to Coachella Valley	✓	September 2010
Identification of integration opportunities among submitted projects	✓	September 2010
Development and refinement of a project prioritization and selection process	✓	September 2010
Establishment of a long-term governance structure	✓	September 2010
Identification of Plan performance reporting and monitoring tools		est. October 2010
Development of common understanding of the regional benefits and impacts of Plan implementation		est. October 2010
Establishment of a data management system and framework for technical analysis associated with IRWM planning		est. October 2010

The CVRWMG is currently developing an IRWM Plan that will meet the program requirements. While the CVRWMG recognizes that more work is necessary to more fully develop key sections of the IRWM Plan (as outlined in the proposed Work Plan), the CVRWMG believes that preparing and adopting and IRWM Plan by December 2010 is critical because it:

- Provides an earlier roadmap for integrated planning activities,
- Demonstrates to stakeholders and elected officials that the CVRWMG members are capable of collaborating for the benefit of the region, and
- Begins earlier the discussion of regional prioritization of projects given the tight economic times being faced by in the Coachella Valley and by members of the CVRWMG.

D. Stakeholder Identification and Outreach

Building understanding and support for the Coachella Valley IRWM Plan and grant application processes among key stakeholders, as well as the general public, is critical to ensuring the IRWM Plan reflects the local needs, promotes the formation of partnerships, and encourages coordination with state and federal agencies. The CVRWMG has taken a very proactive approach to implementing public outreach and information dissemination and the work to date has been generating broad-based support for the IRWM Plan. This section presents an overview of the variety of outreach mechanisms that are being used to improve the general awareness of the Coachella Valley IRWM program. It is critical that these programs continue during the update of the IRWM Plan as the issues and conflicts to be further addressed are expected to be more complex and potentially costly.

Stakeholder Identification

The Coachella Valley IRWM region recognized the importance of including other entities in the IRWM planning process. As a result, the CVRWMG has reached out to engage a broad range of organizations or agencies. All stakeholders identified by the CVRWMG and Planning Partners have been contacted and invited to participate in the program, either through email or written communication. Table 4 provides an overview of all stakeholders contacted.

The goal of the stakeholder coordination effort is to provide a means for the region's various entities with interests and/or authority over water management in the region to maintain an active level of involvement in the IRWM program and implementation of the IRWM Plan.

Planning Partners

One of the first steps for the Coachella Valley IRWM program was to identify the Planning Partners who would serve an advisory role for the development of the IRWM Plan and grant applications. This was done through exploratory meetings held by the CVRWMG with other water resource agencies in the Valley. This led the CVRWMG to identify areas of mutual interests and opportunities for collaboration on the Coachella Valley IRWM Plan. A list of the Planning Partners also can be found in Table 4.

The Planning Partners support the CVRWMG with the following tasks:

- Reviewing and contributing to draft issues identification, goals and objectives, project prioritization criteria, long-term governance, implementation framework, and other Plan deliverables;
- Providing guidance on how to outreach to key stakeholders, including disadvantaged communities and tribes; and
- Contributing to agenda and content for public workshops.

Stakeholder Involvement

The goal of stakeholder involvement is to increase awareness, understanding, and support for the Coachella Valley IRWM planning effort among interested parties and the general public. The benefits of keeping the general public informed of the IRWM program and subsequent IRWM Plan implementation include educating constituents and politicians about the importance and interrelation of water management strategies, increased regional as well as local support for projects, and generating broad-based support for continued regional coordination.

Various outreach activities were done to solicit public involvement in the development of the Coachella Valley IRWM Plan. These outreach activities consisted of:

- **Coachella Valley Planning Partners –** The goal was to establish a balanced membership and participation from representatives of all significant water resource issues areas in the Valley.
- **Public Workshops –** Enables stakeholders and the general public to help guide the actions and policies of the CVRWMG and support the development of the IRWM Plan.
- **Website –** Contains information pertaining to the IRWM program, including meeting information, documents, maps and other resources; this was a key component of the regional outreach program.
- **Newsletters –** Contains information on upcoming meetings and major milestones in the IRWM program to ensure stakeholders and the general public were engaged.
- **Press Releases –** Local newspapers are encouraged to provide coverage of meeting and provide updates on the progress of the IRWM planning efforts.

Table 4: Coachella Valley IRWM Stakeholder List

Agency / Organization	Stakeholder	Planning Partner
CVRWMG		
Coachella Water Authority	✓	✓
Coachella Valley Water District	✓	✓
Desert Water Agency	✓	✓
Mission Springs Water District	✓	✓
Indio Water Authority	✓	✓
Cities		
City of Cathedral City	✓	✓
City of Coachella	✓	✓
City of Desert Hot Springs	✓	✓
City of Indian Wells	✓	✓
City of Indio	✓	✓
City of La Quinta	✓	✓
City of Palm Desert	✓	✓
City of Palm Springs	✓	✓
County of Riverside		
Riverside Co Department of Health	✓	
Riverside Co Economic Development Agency	✓	✓
Riverside Co Environmental Programs	✓	✓
Riverside Co Flood Control and Water Conservation District	✓	✓
Riverside Co Regional Park District	✓	
Supervisor Ashley's office	✓	✓
Supervisor Benoit's office	✓	✓
Community Councils		
Bermuda Dunes Community Council	✓	
Desert Edge Community Council	✓	✓
Desert Palms Community Council	✓	
Indio Hills Community Council	✓	
Mecca Community Council	✓	
North Shore Community Council	✓	
Oasis Community Council	✓	
Sky Valley Community Council	✓	
Thermal Community Council	✓	
Thousand Palms Community Council	✓	
Vista Santa Rosa Community Council	✓	
Resource Agencies		
Bureau of Indian Affairs	✓	✓
Bureau of Land Management	✓	
California Department of Fish and Game	✓	
Coachella Valley Association of Governments	✓	✓
Colorado River Regional Water Quality Control Board	✓	✓
Department of Water Resources	✓	✓
DAC Representatives		
California Rural Legal Assistance Inc./Foundation	✓	✓
Clean Water Action	✓	
Community Water Center	✓	
Desert Alliance for Community Empowerment	✓	

Agency / Organization	Stakeholder	Planning Partner
Environmental Justice Coalition for Water	✓	
Poder Popular	✓	✓
Pueblo Unido CDC	✓	✓
Tribes		
Agua Caliente Band of Cahuilla Indians	✓	✓
Augustine Band of Mission Indians	✓	✓
Cabazon Band of Mission Indians	✓	✓
Morongo Band of Mission Indians	✓	✓
Torres-Martinez Desert Cahuilla Indians	✓	✓
Twenty-Nine Palms Band of Mission Indians	✓	✓
Other Water/Wastewater Providers		
Myoma Dunes Mutual Water Company	✓	
Salton Community Services District	✓	✓
San Gorgonio Pass Water Agency	✓	
Valley Sanitary District	✓	✓
Whitewater Mutual Water Company	✓	
Special Interests		
Big Morongo Preserve	✓	
Building Industry Association	✓	
Center for Natural Land Management	✓	
Coachella Valley Archaeological Society	✓	
Coachella Valley Conservation Commission	✓	
Coachella Valley Economic Partnership	✓	✓
Coachella Valley Mosquito and Vector Control	✓	
Coachella Valley Mountains Conservancy	✓	
Coachella Valley Parks and Recreation District	✓	
Coachella Valley Resource Conservation District	✓	
Deep Canyon Desert Research	✓	
Family Services of the Desert	✓	
Friends of the Desert Mountains	✓	✓
Groundwater Guardians	✓	
Hi-Lo Golf Course Superintendents Association	✓	
League of Women Voters	✓	
Sierra Club	✓	
Wildlands Conservancy	✓	
School Districts		
Coachella Valley Unified School District	✓	
Desert Sands Unified School District	✓	
Palm Springs Unified School District	✓	
Elected Officials		
Assemblyman Brian Nestande (64th Dist.)	✓	
Assemblyman Manuel Perez (80th Dist.)	✓	
Congresswoman Mary Bono Mack	✓	
Senator Denise Moreno Ducheny	✓	

- **On-line Project Database** – Facilitates communications among planners and project proponents and provide universal access to information about the IRWM projects in the Coachella Valley region.
- **Correspondence** – Electronically distributing a list of stakeholders, interested parties, and any special subgroup involved in the IRWM planning efforts; primary method of communication.

No structures are in place that would create a barrier to participation; therefore, nothing has to be deconstructed and each procedure, process, or structure that is put in place can be evaluated for its effectiveness at being inclusive and providing transparency. A review of the CVRWMG governance structure will show that the process for stakeholder participation is rooted in broad-based community input through key processes:

- Stakeholders focused on a variety of water resource issues are invited to participate, as evidenced by the broad reach of the Stakeholder List,
- Stakeholders are drawn from outside the water community, to include environmental, recreational, development, and land use representatives, and
- Stakeholders have wide regional distribution in their geographic reach.

The intent of the CVRWMG is to establish processes that will achieve a collaborative, multi-stakeholder result so that regional solutions address concerns of DACs, tribes, the environmental community, and other key stakeholders.

E. Disadvantaged Communities

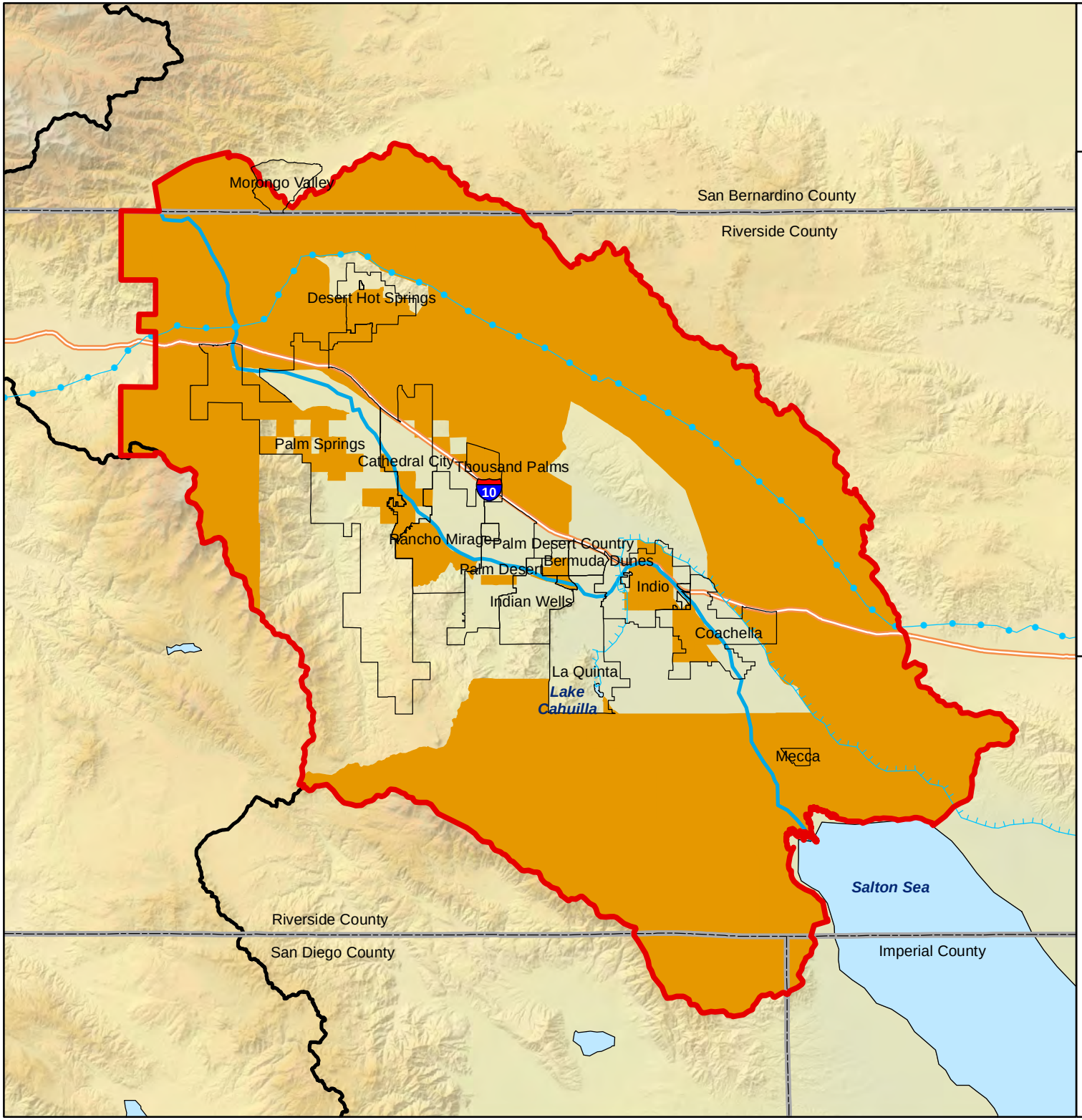
The Coachella Valley has a wide range of disadvantaged communities (DACs) from different demographics, including migrant farmers, urban residents, and low income seniors. Water management issues associated with the Region's DACs include arsenic contamination in drinking water supplies, sanitation needs to protect groundwater and, in general, affordability of water. The goal of DAC outreach is to identify and obtain input from groups that may be otherwise limited from participating in the IRWM planning and implementation efforts due to financial constraints.

The State of California defines a DAC as a community with an annual median household income (MHI) that is less than 80% of the Statewide MHI. MHI's were estimated through U.S. Census Bureau data for Coachella Valley census tracts. Census tracts are small, relatively permanent geographic entities within counties delineated by a committee of local data users. Mapping at the Census tract scale is only available using 2000 Census data. Statewide MHI in year 2000 was $47,493 and DACs are considered those who earned less than $37,994. Using 2000 Census tracts, Figure 4 shows the DACs within the Valley.

Using the 2006-2008 American Community Survey, the Statewide MHI was $61,654 and 80% of the Statewide MHI was $48,923[1]. MHI's for Coachella Valley cities are as follows (* indicates DACs):

- Cathedral City $38,887*
- Coachella $28,590*
- Desert Hot Springs $25,987*
- Indian Wells $93,986
- Indio $34,624*
- La Quinta $54,552
- Palm Desert $48,316*
- Palm Springs $35,973*
- Rancho Mirage $59,826

[1] U.S. Census Bureau, 2006-2008 American Community Survey. American FactFinder: California. http://factfinder.census.gov/home/saff/main.html?_lang=en



Disadvantaged Communities

Figure 4

- Colorado River Aqueduct
- Coachella and All American Canals
- Whitewater River Stormwater Channel
- Interstate Hwys.
- Lakes
- Cities
- CVRWMG Management Region
- Colorado River Funding Region Boundary
- County Lines
- DAC as of 2000 Census

Note: Statewide median household income (MHI) in year 2000 was $47,493. Disadvantaged communities are considered those who earned less than $37,994 (80% Statewide MHI)

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Miles

COACHELLA VALLEY IRWMP

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File Location: L:\Projects GIS\0264-001_CoachellaIRWMP\mxds\
Date Updated: July 2010
Made By: DNF
Department: RMC Water & Environment

With the above information, six of the nine Coachella Valley cities in the region would qualify in their entirety as a DAC. Additional mapping will be conducted to ensure that areas or pockets of DACs, including mobile home communities, are included. Known pockets of DACs exist in remote areas of the East Valley (Mecca, Oasis, and Thermal); many of those DACs are dependent on on-site drinking water wells that are contaminated by arsenic. Through planned coordination with leaders and representatives of those DACs (see ***Task 1-3 in the Work Plan***), the IRWM program will help to better define and characterize those DACs beyond Census tract mapping. The Riverside County DEH and Economic Development Agency (EDA) also need to be involved in these efforts to identify and outreach to DACs.

Through targeted outreach, the CVRWMG identified the major water-related issues and concerns facing these groups. DAC and EJ organizations targeted during outreach for the Coachella Valley IRWM program include the following:

- California Rural Legal Assistance Inc./Foundation
- Clean Water Action
- Community Water Center
- Desert Alliance for Community Empowerment
- Desert Edge Community Council
- Environmental Justice Coalition for Water
- Natural Science Collaborative of the Desert Region
- Pueblo Unido CDC
- Poder Popular

Outreach to Disadvantaged Communities

Various outreach activities were conducted to solicit DAC and EJ members to participate in the development of the Coachella Valley IRWM Plan. These outreach activities consisted of:

- **DAC/EJ Outreach Meetings –** to understand their critical water supply and water quality needs and to identify potential solutions.
- **Notices and Newsletters –** put together by CVRWMG staff and community leaders for DAC/EJ communities notifying them of the current state of the Valley's water-related resources, IRWM program, and solutions being generated to address their needs.
- **CVRWMG Coordination –** in which CVRWMG partners were identified as the liaison to DAC/EJ organizations to ensure coordination and communication.
- **DAC Outreach Demonstration Program –** where the CVRWMG identified the opportunity for more comprehensive efforts relating to DAC outreach; a proposal for funding potential DAC projects was submitted.
- **Correspondence** – between DAC/EJ organizations and CVRWMG liaison and/or Planning Partners representative via telephone, email, and when necessary, office visits.
- **Attendance at Stakeholder Community Meetings—**the CVRWMG visited a stakeholder meeting regarding DAC issues in an effort to gain greater perspective of the community needs.

F. Water-Related Objectives and Conflicts

Both conflicts and agreements have occurred between the agencies prior to the establishment of the CVRWMG. Major water-related conflicts have generally revolved around groundwater recharge and pumping activities and associated assessments. MSWD was annexed as a sub agency to DWA in 1963 and since that time, land owners within MSWD's boundaries have paid a SWP assessment for the capital

costs of the SWP. All land owners within DWA's boundaries pay the assessment as well. As early as 1984, MSWD, CVWD, and DWA held discussions about recharging the Mission Creek Subbasin and the facilities that would be required. In 2001, construction of a turnout from the Colorado River Aqueduct was begun and by 2002, construction of the spreading basins was completed. In 2001, MSWD adopted a resolution declaring its support for DWA's program to replenish the Mission Creek Subbasin. Construction of the recharge basins was completed the following year.

CVWD and DWA executed the Mission Creek Groundwater Replenishment Agreement in April 2003, which allowed for storage of advanced deliveries from MWD. In a May 2003 White Paper, MSWD outlined its concerns with the Agreement, underscoring its dependence and interest in the subbasin. In October 2003, MSWD filed action in the Superior Court of the State of California against DWA and CVWD seeking a writ of mandate, declaratory relief for prescriptive and appropriative water rights and declaratory and injunctive relief for a physical solution of a groundwater basin. MSWD sought adjudication of the subbasin and questioned the quality of the imported water. Both CVWD and DWA filed answers challenging the complaint. In December 2004, MSWD, DWA, and CVWD reached a settlement agreement. The agreement stated the agencies would work jointly to manage the subbasin. The agreement included provisions regarding payment of Replenishment Assessment Charges, shared costs for basin studies and development of a Basin Management Plan for the Mission Creek and Garnet Hill Subbasins. In October 2008, final contracts needed for development of the Basin Management Plan were approved by CVWD and MSWD. DWA agreed with development of modeling studies but questioned whether the Basin Management Plan would duplicate efforts expected for the IRWM Plan. In April 2009, DWA approved a modified proposal to facilitate management plan preparation.

In January 2005, CVWD established a replenishment assessment charge that covered East Valley groundwater pumpers, including the cities of Coachella and Indio. The City of Indio ceased paying the charge in July 2007, challenging the benefits of the Dike 4 replenishment project to the City. One year later, after negotiations with the City failed to resolve the issues, CVWD filed suit against the City of Indio for nonpayment. In April of 2008, IWA filed a cross complaint seeking CVWD to show proof that the IWA received any special benefit from the replenishment assessment charge. In December 2008, CVWD and the City of Indio announced they had approved terms of an agreement to settle the nonpayment lawsuit. The terms include the following:

- CVWD and IWA will participate in an IRWM Plan,
- Future groundwater basin recharge projects financed through the Replenishment Assessment Charge will continue to benefit the lower basin,
- A recharge facility will be built within the City of Indio if feasible, and
- IWA will pay CVWD all outstanding Replenishment Assessment Charges.

In early 2007, CVWD filed a California Environmental Quality Act (CEQA) lawsuit against IWA regarding a development within IWA's sphere of influence. The Citrus Ranch development is located outside of the Whitewater River basin and in order to move forward with the development, IWA had planned to export water from the basin to Citrus Ranch. CVWD did not believe IWA had researched alternative sources and addressed the overdraft impact. The lawsuit was settled in October 2008 stating among other things, that the developer of Citrus Ranch, SunCal, will pay the city approximately $5.6 million to offset the project's impact on the local groundwater supplies.

DWA and CVWD assess a replenishment assessment based on the amount of water pumped. Therefore, revenues are generated from the extraction of groundwater and not the delivery of imported water. This is a key component in understanding water management issues within the Coachella Valley IRWM region.

This information will be provided in *Chapter 2, Region Description* of the IRWM Plan now in development.

Process for Defining the Objectives

The process for developing objectives for the Coachella Valley IRWM Plan was based on a succession of public workshops and meetings. The CVRWMG, Planning Partners, and stakeholders all participated in a series of facilitated brainstorming sessions on the water management issues facing the region. The process of identifying and developing regional goals and objectives involved the following steps:

- Compiling a preliminary set of water resource issues and conflicts based on regional plans, studies, and technical reports;
- Refining and clarifying the region's water resource issues through a series of facilitated public workshops and meetings;
- Translating the various water resource issues identified by stakeholders into a set of goals and objectives that achieve consensus; and
- Revising the regional goals and objectives based on stakeholder input and feedback.

The CVRWMG undertook an extensive review of regional plans, studies, and technical reports to identify the preliminary set of water resource issues. Information was obtained from a broad range of sources, including CVWD, CWA, DWA, MSWD, IWA, CVAG, DWR, RCAC, Poder Popular, RCFCWCD, County of Riverside, Colorado River RWQCB, and Desert Recreation District. Plans and reports included water management plans, water quality reports, engineer's reports, habitat conservation plans, general plans, groundwater replenishment reports, master plans, feasibility studies, systems assessments, stormwater management plans, and trails studies.

Following completion of the preliminary issues identification, a series of facilitated public workshops and meetings were held to gather further information on key water resource issues from stakeholders. After this thorough vetting process, the CVRWMG developed a strawman list of goals and objectives for stakeholder consideration. These draft goals and objectives were intended to capture and address all of the many issues raised by stakeholder throughout the issue identification phase. A wide range of stakeholders were gathered in several different meetings to discuss and clarify the issues, goals, and objectives:

- Planning Partners, including city, county, and regulatory representatives
- Targeted outreach to DAC representatives
- Targeted outreach to tribal representatives
- Public workshop attended by broad range of stakeholders

Following revisions based on all comments received, a final list of goals and objectives were included in the project database, on the www.cvrwmg.org website, and in the IRWM Plan.

This information will be provided in *Chapter 5, Objectives* of the IRWM Plan now in development.

IRWM Plan Goals and Objectives

When the CVRWMG established the Coachella Valley IRWM program in September 2008, CVRWMG members articulated the following overall intent:

> *"3.1.1 This MOU is to memorialize the intent of the Partners to coordinate and share information concerning water supply planning programs and projects and other information, and to improve and maintain overall communication among the Partners involved. It is anticipated that coordination and information sharing among the Partners will assist the agencies in achieving their respective missions to the overall well-being of the region."*

Through input and discussion by the CVRWMG, Planning Partners, and other stakeholders, the goals of this IRWM Plan are to optimize water supply reliability, protect water quality, provide stewardship of water-related natural resources, coordinate water resource management, and ensure cultural and social and economic sustainability of water in the Coachella Valley.

IRWM Plan Goals

- Optimize water supply reliability,
- Protect or improve water quality,
- Provide stewardship of water-related natural resources,
- Coordinate water resource management, and
- Ensure cultural, social, and economic sustainability of water in the Coachella Valley.

Through a series of facilitated public workshops and meetings, the CVRWMG, Planning Partners, and stakeholders developed thirteen specific IRWM Plan objectives to accomplish the five broad IRWM Plan goals. Detailed descriptions of each of the objectives are presented in the following sections along with the rationale for development and inclusion of each objective.

IRWM Plan Objectives

- Provide reliable water supply for residential and commercial, agricultural community, and tourism needs.
- Manage groundwater levels to manage and reduce overdraft, manage perched water, and minimize subsidence.
- Secure reliable imported water supply, including restoring/improving reliability of State Water Project supply and securing other imported water supplies.
- Maximize local supply opportunities, including water conservation, water recycling and source substitution, and capture and infiltration of runoff.
- Protect groundwater quality and improve, where feasible.
- Preserve and improve surface water quality by maintaining integrity of agricultural drainage systems, protecting the quality of natural runoff used for potable supply, and reducing pollution in stormwater runoff.
- Preserve local environment and restore, where feasible.
- Manage flood risks, including current acute needs and needs for future development.
- Optimize conjunctive use of available water resources.
- Maximize stakeholder involvement and stewardship in water resource management.
- Address water-related needs of local Native American culture.
- Address water and sanitation needs of disadvantaged communities, including those in remote areas.
- Maintain affordability of water.

G. Regional Priorities

The CVRWMG and Planning Partners developed the project submittal process in May 2010. This process involves three major steps: solicitation, prioritization, and selection. Solicitation can be described as a "Call for Projects" that help meet the region's established goals and objectives. This step's objective is to compile a comprehensive list of water-related projects for the region. Any individual(s) that represent a public agency or non-profit organization with common water interests and needs can submit a project to the IRWM program via the project website (www.cvrwmg.org). An online project database was developed to assist in the management of project information (http://irwm.wrime.com/cvirwm/login.php). The database provided stakeholders with access to project information based on username/login functionality. Stakeholders accessed the online project database from the project website, entered and edited their project information, and submitted the projects for consideration in the IRWM Plan. Using an

online web tool for management of the IRWM project list allows all project information to be shared with other users.

After the July 30, 2010 deadline, projects submitted through the open Call for Projects were reviewed, ranked, and prioritized using a two-step screening and scoring approach. Figure 5 below illustrates the overall process for screening of projects for the IRWM program. As shown, projects were first evaluated for consistency with the regional objectives. Projects that did not meet any regional objectives were excluded from the IRWM Plan. Projects that were found to meet at least one objective passed the screening process and moved on to the next step of the project review process: scoring and ranking.

To evaluate and prioritize projects as part of the IRWM planning process, the scoring and ranking process takes into account three fundamental components:

1) Principles of IRWM planning,

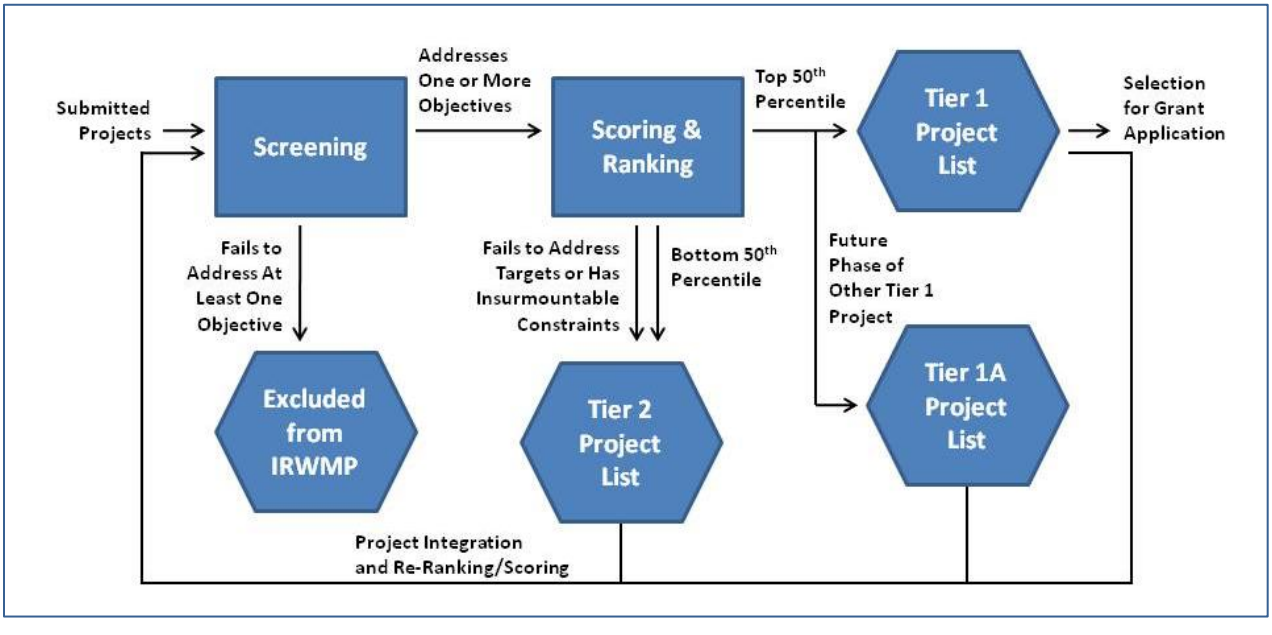
2) Priorities of the Coachella Valley region,

3) Feasibility of projects to proceed.

Through a consensus process, the CVRWMG and Planning Partners established the relative importance of each of these criteria. The approach to scoring projects and the relative importance of each criterion is presented in Table 5. Project scoring was developed to identify projects that contribute to the following principles of IRWM planning:

- Addresses multiple IRWM Plan Objectives;
- Integrates multiple resource management strategies;
- Addresses a Statewide Priority;
- Linked to other projects; and
- Involves more than one partner.

Figure 5: Prioritization Process Overview



Through facilitated meetings to discuss project prioritization, the CVRWMG, Planning Partners, and stakeholders have further determined that the following IRWM Plan goals and objectives are priorities for the Coachella Valley:

- Optimize water supply reliability (Goal 1, includes Obj 1-4)
- Protect or improve water quality (Goal 2, includes Obj 5-6)
- Manage flood risks, including current acute needs and needs for future development (Obj 8)
- Optimize conjunctive use of available water resources (Obj 9)
- Address water and sanitation needs of disadvantaged communities, including those in remote areas (Obj 12)

Each project was then evaluated with respect to the criteria presented in Table 5. Based on the outcome of this evaluation, each project was assigned a score for each criterion for a total maximum score of 180. Projects were then be ranked with the highest-scoring project ranked by number one. The top 50th percentile of projects (i.e., all project above the median) were considered Tier 1 projects that strongly contribute to the attainment of regional goals and objectives. Further, all future phases of Tier 1 projects were considered Tier 1A, such that only the ready-to-proceed Tier 1 projects were identified as regional priorities. The bottom 50th percentile (i.e., all projects below the median) were considered Tier 2 projects that are necessary to manage water in the region, but not considered priorities under IRWM planning.

Tier 1 projects will be moved forward for consideration in various IRWM funding applications and the region's priorities for implementation. A full description of this project review and prioritization process will be provided in *Chapter 7, Project Evaluation and Prioritization* of the IRWM Plan now in development.

H. Data and Technical Analysis

Data collection, storage, and dissemination to IRWM participants, stakeholders, the public, and the State are coordinated by the CVRWMG. The primary method used for data collection and management is the online project database commissioned by the CVRWMG. The database is aimed at providing universal access to information about IRWM projects in the Coachella Valley region. The project database allows project proponents and other interested parties to add, edit, and review project proposals throughout the region. This tool, coupled with the Public Workshops, is intended to connect stakeholders with one another to identify and enhance synergies among projects, hopefully leading to better integration and stronger partnerships. The online project database will also enhance CVRWMG efforts to inform the general public about "What is IRWM?" through concrete project examples.

As the IRWM planning process moves forward, project proponents will use the database to store technical information such as designs, feasibility studies, reports and other information specific to the project in any phase of development. This information will be provided in *Chapter 8, Framework for Implementation* of the IRWM Plan now in development.

Table 5: Project Scoring Guide

Component	Criterion	Scoring Procedure[1]	Points Assigned	Weighting	Subtotal
1. Principles of IRWM Planning	A. Addresses Multiple IRWM Plan Objectives	Score based on # of objectives addressed	4+ objectives = 20 pts 3 objectives = 15 pts 2 objectives = 10 pts 1 objective = 5 pts	11%	70
	B. Integrates Multiple Resource Management Strategies	Score based on # of strategies employed	8+ strategies = 20 pts 6-7 strategies = 15 pts 4-5 strategies = 10 pts 2-3 strategies = 5 pts	11%	
	C. Addresses a Statewide Priority	Score is based on Yes/No response	Yes = 10 pts No = 0 pts	6%	
	D. Linked to Other Projects	Score is based on Yes/No response	Yes = 10 pts No = 0 pts	6%	
	E. Involves More than One Partner	Score is based on Yes/No response	Yes = 10 pts No = 0 pts	6%	
2. Priorities of the Coachella Valley	A. Optimizes Water Supply Reliability	Score is based on Yes/No response	Yes = 20 pts No = 0 pts	11%	100
	B. Protects or Improves Water Quality	Score is based on Yes/No response	Yes = 20 pts No = 0 pts	11%	
	C. Manages Flood Risks	Score is based on Yes/No response	Yes = 20 pts No = 0 pts	11%	
	D. Optimizes Conjunctive Use of Surface and Groundwater Supplies	Score is based on Yes/No response	Yes = 20 pts No = 0 pts	11%	
	E. Directly Benefits Disadvantaged Communities	Score is based on Yes/No response	Yes = 20 pts No = 0 pts	11%	
3. Project Feasibility	A. Identified in Existing Plan	Score is based on Yes/No response	Yes = 10 pts No = 0 pts	6%	10
				Total	180

I. Resource Management Strategies

The Coachella Valley IRWM Plan considered each resource management strategy (RMS) listed in the *California Water Plan Update 2009* as stated by *Proposition 84 and Proposition 1E IRWM Guidelines* (DWR 2010). The *California Water Plan Update 2009* identified seven categories of RMS applicable to water management in California. Table 6 presents the seven categories of RMS considered for the Coachella Valley IRWM Plan. These strategies include all the resource management approaches identified by the *California Water Plan Update 2009*. A variety of approaches to water management must be considered to fully address the regional goals and objectives of the Coachella Valley IRWM region. Though all the RMS identified by the *California Water Plan Update 2009* were considered not all are appropriate for meeting Coachella Valley's IRWM plan goals and objectives.

Of primary importance to the Coachella Valley IRWM Plan is the concept of integration, which involves addressing water supply, water quality, flood control, and ecosystem challenges through multi-benefit project solutions. Projects and programs which are able to address multiple Valley issues through the combination of RMS and/or partnerships are given priority weighting. Single-objective projects, in contrast, that may address a critical water management needs are re-designed to seek greater integration with other regional efforts.

A detailed discussion of the RMS applicable to the Coachella Valley will be provided in *Chapter 6, Resource Management Strategies* of the IRWM Plan now in development.

Table 6: Resource Management Strategies Considered in IRWM Plan

Reduce Water Demand	**Improve Flood Management**
Agricultural Water Use Efficiency	Flood Risk Management
Urban Water Use Efficiency	**Practice Resources Stewardship**
Improve Operational Efficiency and Transfers	Agricultural Lands Stewardship
Conveyance- Delta	Economic Incentives (Loans, Grants and Water Pricing)
Conveyance- Regional/Local	Ecosystem Restoration
System Reoperation	Forest Management
Water Transfers	Recharge Area Protection
Increase Water Supply	Water-Dependent Recreation
Conjunctive Management and Groundwater Storage	Watershed Management
Desalination	**Other Strategies**
Precipitation Enhancement	Crop Idling for Water Transfers*
Recycled Municipal Water	Dewvaporation or Atmospheric Pressure *
Surface Storage- CALFED	Desalination *
Surface Storage- Regional/Local	Fog Collection *
Improve Water Quality	Irrigated Land Retirement *
Drinking Water Treatment and Distribution	Rainfed Agriculture *
Groundwater Remediation/Aquifer Remediation	Waterbag Transport/Storage Technology *
Matching Quality to Use	Education and Outreach **
Pollution Prevention	
Salt and Salinity Management	
Urban Runoff Management	

** RMS listed in California Water Plan 2009 Update, but not appropriate for the Coachella Valley IRWM Region*

*** RMS identified by Coachella Valley Stakeholders*

Source: DWR 2009

J. Plan Implementation

The CVRWMG, with Planning Partners guidance, will be responsible for IRWM Plan implementation responsibilities. In September 2010, the CVRWMG and Planning Partners identified seven short-term priorities for the Coachella Valley IRWM program. These short-term priorities are intended to direct the activities of the local IRWM program for the next three to five years. These implementation actions will move the Coachella Valley IRWM Region toward more integrated planning and will help the CVRWMG fully characterize and address critical water management needs.

Near-term IRWM Plan implementation will focus on the short-term priorities identified through our facilitated consensus-based process. The ***Work Plan*** contained in this Planning Grant proposal addresses several of the short-term priorities; others will be addressed through implementation projects or other program activities.

- **Address Water Quality in DACs** – During the issues identification process with regional stakeholders, critical drinking water quality issues were raised by East Valley DACs. The CVRWMG is committed to developing a more thorough understanding of and identifying solutions for the groundwater quality issues in the Region's DACs. ***Task 2-1 in the Work Plan*** involves a technical evaluation to begin exploring these issues right away. Tackling this critical need head-on will address two of DWR's Statewide Priorities: "Protect Surface Water and Groundwater Quality" and "Ensure Equitable Distribution of Benefits".
- **Manage Flood Risk** – Due to the Valley's susceptibility to flash flooding, the CVRWMG is committed to identifying and improving regional participation in flood protection programs. ***Task 2-3 in the Work Plan*** includes development of an Integrated Flood Management Plan to address local flooding risks. This planning effort directly addresses emergency preparedness, flood protection, floodplain ecosystems, and low impact development techniques that comprise DWR's Statewide Priority "Practice Integrated Flood Management".
- **Improve Relationships with Tribes** – Establishing new relationships between the IRWM program and local tribes will improve regional groundwater management. As demonstrated by ***Task 1-4 in the Work Plan***, the CVRWMG is committed to using the IRWM program as a forum for coordination and collaboration with the Valley's tribes. This consultation will help the Region attain DWR's Statewide Priority "Improve Tribal Water and Natural Resources".
- **Address Emerging Regulations** – Recent changes in the regulatory environment – including the passage of AB1420 and SBX7-6, the State Board's Recycled Water Policy, and ongoing Total Maximum Daily Load (TMDL) efforts – have and will affect water management activities of the CVRWMG. The CVRWMG is committed to working together to address common interests and solutions to these new regulations. ***Task 2-2 in the Work Plan*** involves development of a planning strategy for the Salt and Nutrient Management Plans required by the Recycled Water Policy. DWR's Statewide Priority "Protection Surface Water and Groundwater Quality" specifically promotes salt and nutrient planning as a component of an IRWM Plan. ***Task 2-4 in the Work Plan*** involves development of a monitoring strategy for Groundwater Elevation Monitoring in compliance with SBX7-6.
- **Encourage Septic to Sewer Conversion** – Because of their impacts on groundwater quality in the Valley, the CVRWMG is committed to implementing septic-to-sewer conversion projects through the IRWM program. Various conversion projects throughout the Valley may be coordinated under a larger, more efficient program to address DWR's Statewide Priority "Protect Surface and Groundwater Quality". Dependant on the outcome of the Region's funding application prioritization process, septic-to-sewer projects may be included in the upcoming IRWM Implementation Grant proposal.

- **Address Reduced Reliability** – Developing a better understanding of the State's SWP priorities will assure the CVRWMG of future supply reliability. In the meantime, the CVRWMG is committed to encouraging water conservation and source substitution projects to reduce demand on the imported water supply. For example, the CVRWMG recognizes the importance of expanding the region's recycled water systems to offset potable water demand. With this emphasis on water conservation and recycling, the CVRWMG will implement DWR's Statewide Priority "Drought Preparedness" within the Valley. Dependant on the outcome of the Region's funding application prioritization process, water conservation and/or source substitution projects may be included in the upcoming IRWM Implementation Grant proposal.
- **Create the Data Management System –** As outlined in the IRWM Plan, the CVRWMG is committed to creating a Data Management System (DMS) that will help to manage water resources data and project performance. Over the next few years, the CVRWMG will expand the program website (www.cvrwmg.org) and online project database to provide additional functionality to the region's stakeholders.

Action plans for these short-term priorities, as well as the impacts and benefits expected from implementation of the IRWM Plan, are currently being developed in *Chapter 8, Framework for Implementation* in the IRWM Plan.

K. Current IRWM Plan Standards

The Coachella Valley IRWM Plan is organized in accordance with IRWM Plan Standards established in Appendix C of DWR's IRWM Grant Program Guidelines (August 2010). Table 7 cross-references the IRWM Plan Standards with relevant sections of the Coachella Valley IRWM Plan.

Table 7: Organization of Coachella Valley IRWM Plan

IRWM Plan Standard	Coachella Valley IRWM Plan
Governance	Governance (Chapter 8, Section 8.1)
Region Description	Region Description (Chapter 2, Section 2.1)
Objectives	Objectives (Chapter 5, Section 5.1)
Resource Management Strategies	Resource Management Strategies (Chapter 6, Section 6.2)
Integration	Integration (Chapter 6, Section 6.1)
Project Review Process	Project Selection Process (Chapter 7, Section 7.1)
Impact and Benefit	Impacts and Benefits (Chapter 8, Section 8.3)
Plan Performance and Monitoring	Evaluation of Plan Performance (Chapter 7, Section 7.2)
Data Management	Data Management (Chapter 8, Section 8.5)
Finance	Finance (Chapter 8, Section 8.4)
Technical Analysis	Technical Analysis (Chapter 8, Section 8.6)
Relation to Local Water Planning	Relation to Local Water Planning (Chapter 3, Section 3.3)
Relation to Local Land Use Planning	Relation to Local Land Use Planning (Chapter 3, Section 3.4)
Stakeholder Involvement	Stakeholder Involvement (Chapter 3, Section 3.1)
Coordination	Agency Coordination (Chapter 8, Section 8.2)
Climate Change	Climate Change (Chapter 2, Section 2.9)

Although the IRWM currently under development will meet the State's Plan Standards, there are additional technical evaluations and studies that will need to be conducted in order to fully leverage the regional benefits of integrated planning. Those additional studies are listed in Table 8 and below, along with the sections of the IRWM where the results will be incorporated.

Table 8: Technical Studies for the IRWM Plan Update

Technical Study	Purpose	Work Plan
DAC Water Quality Evaluation	To provide near-term solutions to critical arsenic and other drinking water contaminants in DAC communities and to provide a basis for the development of longer-term solutions	Task 2-1
Salt and Nutrient Management Planning Strategy	To establish a framework for how the region's stakeholders can work together on development of Salt and Nutrient Management Plan.	Task 2-2
Integrated Flood Management Plan	To integrate flood management planning in the Valley, to promote development of integrated flood management solutions Valley-wide, and to develop near-term integrated flood management solutions DAC communities.	Task 2-3
Groundwater Elevation Monitoring Strategy	To establish a framework for coordinating groundwater elevation monitoring, analysis, and reporting to DWR in compliance with SBx7-6.	Task 2-4

Below is a complete description of the IRWM planning activities that must occur in order to leverage the trust and cooperation that has been achieved to date by the CVRWMG and Planning Partners. This Planning Grant proposal will provide the Coachella Valley with a solid foundation of stakeholder coordination and technical work products, leading to a complete IRWM Plan Update.

Ongoing Outreach

In order to maintain the Coachella Valley IRWM program's role in the regional coordination of water resources management, the CVRWMG must continue ongoing outreach activities. These outreach activities will provide the CVRWMG with the stakeholder input and involvement necessary to further update and refine the inaugural IRWM Plan. Proposed outreach activities include:

- **CVRWMG Program Management** – ***Task 1-1 of the Work Plan*** involves the monthly CVRWMG business meetings necessary to manage the IRWM program. This ongoing CVRWMG effort is necessary to continue the momentum developed through the IRWM planning process. A summary of and results from these meetings will be provided in *Chapter 3, Stakeholder Involvement* of the IRWM Plan.
- **Planning Partners Coordination** – ***Task 1-2 of the Work Plan*** involves quarterly Planning Partners meetings to review and provide guidance to the CVRWMG. Ongoing input from the Planning Partners is essential for ensuring that the IRWM program is truly a collaborative regional effort. A summary of and results from these meetings will be provided in *Chapter 3, Stakeholder Involvement* of the IRWM Plan.
- **DAC Outreach and Technical Support** – ***Task 1-3 of the Work Plan*** involves targeted outreach and involvement of DAC representatives throughout the region, as well as technical support for development of project submittals that address DAC needs. This effort is intended to directly address DWR's Statewide Priority "Ensure Equitable Distribution of Benefits" by providing funding for both outreach and technical support. A summary of and results from these meetings will be provided in *Chapter 3, Stakeholder Involvement* of the IRWM Plan.

- **Tribal Outreach and Coordination** – ***Task 1-4 of the Work Plan*** involves targeted outreach and collaboration with the Valley's tribes. With this effort, the CVRWMG is committed to achieving DWR's Statewide Priority "Improve Tribal Water and Natural Resources". A summary of and results from these meetings will be provided in *Chapter 3, Stakeholder Involvement* of the IRWM Plan.
- **Public Involvement** – ***Task 1-5 of the Work Plan*** contains and framework for ongoing public outreach and involvement, including public workshops at key IRWM Plan Update milestones, updates to the program website, newsletters, press releases, and expansion of the online project database to better meet the Valley's needs. A summary of and results from these meetings will be provided in *Chapter 3, Stakeholder Involvement* of the IRWM Plan.

DAC Water Quality Evaluation

Identified as a short-term priority for the Coachella Valley IRWM program, the purpose of the DAC Water Quality Evaluation in ***Task 2-1 of the Work Plan*** is to provide near-term solutions to critical arsenic and other drinking water contaminants in DAC communities and to provide a basis for the development of longer-term solutions. These issues were raised repeatedly by IRWM stakeholders are critical to the health and safety of the region's residents. The CVRWMG is committed to developing a more thorough understanding and identifying solutions for the groundwater quality issues in the region's DACs. Tackling this critical need head-on will address two of DWR's Statewide Priorities: "Protect Surface Water and Groundwater Quality" and "Ensure Equitable Distribution of Benefits". The DAC Water Quality Evaluation will be incorporated into *Chapter 4, Issues and Needs* (under Water Quality) of the IRWM Plan Update.

Salt and Nutrient Management Planning Strategy

Identified as a short-term priority for the Coachella Valley IRWM program, the purpose of the Salt and Nutrient Management Planning Strategy in ***Task 2-2 of the Work Plan*** is to establish a framework for how the region's stakeholders can work together on development of Salt and Nutrient Management Plan. This effort will improve the quality of the IRWM Plan by assisting the region's ability to meet water quality objectives and expand recycled water supplies. This effort will also significantly improve the likelihood of full implementation of the IRWM Plan by providing a regulatory framework for future projects. This effort will fully implement Strategy 18 of the *California Water Plan 2009 Update*, as well as DWR's Statewide Priority "Protect Surface Water and Groundwater Quality" which endorses salinity and nutrient management planning as a component of an IRWM Plan. The Salt and Nutrient Management Planning Strategy will be incorporated into *Chapter 7, Project Evaluation and Prioritization* (under Regional Priorities) of the IRWM Plan Update.

Integrated Flood Management Plan

Identified as a short-term priority for the Coachella Valley IRWM program, the purpose of the Integrated Flood Management Plan in ***Task 2-3 of the Work Plan*** is to integrate flood management planning in the Valley, to promote development of integrated flood management solutions Valley-wide, and to develop near-term integrated flood management solutions DAC communities. This effort will also assist DWR with development of Statewide FloodSAFE Plan intended to characterize flood management needs and opportunities throughout the State. Because of the severe flood risks currently faced by Valley residents during flash flooding events, this effort is a critical element of a comprehensive IRWM Plan. Further, this planning effort directly addresses DWR's Statewide Priority "Practice Integrated Flood Management". The Integrated Flood Management Plan will be incorporated into *Chapter 4, Issues and Needs* (under Flood Management) of the IRWM Plan Update.

Groundwater Elevation Monitoring Strategy

Identified as a short-term priority for the Coachella Valley IRWM program, the purpose of the Groundwater Elevation Monitoring Strategy in ***Task 2-4 of the Work Plan*** is to establish a framework for coordinating groundwater elevation monitoring, analysis, and reporting to DWR in compliance with SBx7-6. Because groundwater supply is an essential component of the Valley's water management system, this effort will serve as a necessary update to the IRWM Plan. The Groundwater Elevation Monitoring Strategy will be incorporated into *Chapter 7, Project Evaluation and Prioritization* (under Regional Priorities) of the IRWM Plan Update.

Climate Change Analysis

The purpose of the Climate Change Analysis in ***Task 3-3 of the Work Plan*** is to adapt the project selection and prioritization processes in the IRWM Plan to emerging understanding of the effects and implications of climate change, as well as identification of mitigation and greenhouse gas (GHG) reduction strategies per regulations. These updates will occur based on DWR's forthcoming climate change guidelines and requirements. In order to implement DWR's Statewide Priority "Climate Change Response Actions", the analysis will address both climate adaptation and mitigation strategies. The Climate Change Analysis will be incorporated into *Chapter 2, Region Description* of the IRWM Plan Update.

IRWM Plan Update

As the technical evaluations in Task 2 move forward, the CVRWMG will incorporate any new information learned about the Valley's water management systems into the IRWM Plan. This may include clarification of critical water supply or water quality issues and/or incorporation of the new planning strategies into the Plan framework. ***Task 3-1 of the Work Plan*** provides for refinement of the issues, goals and objectives, and regional priorities established in the IRWM Plan. ***Task 3-4 of the Work Plan*** provides for refinement of the implementation framework based on the Valley's transition from an emerging to an approved IRWM region. ***Task 3-5 of the Work Plan*** provides for incorporation of all of the work effort in Tasks 1 through 3 into the revised and improved IRWM Plan Update.

Plan Performance

Task 3-2 of the Work Plan provides for implementation and refinement of an annual reporting process to be used to evaluate the region's progress on fulfilling the short-term priorities (i.e., program implementation), as well the region's progress on implementing the identified water management projects (i.e., project implementation).

Work Plan

The following Work Plan provides a detailed description of the tasks necessary to complete a full update of the Coachella Valley IRWM Plan.

Task 1: Ongoing Outreach

The CVRWMG has initiated a stakeholder outreach process to help support development and adoption of an IRWM Plan. Building understanding and support for the IRWM program and grant application processes among key stakeholders, as well as the general public, is critical to the success of the ongoing program. A proactive approach to implementing public outreach and information dissemination will assist the CVRWMG in generating broad-based support for the effort. A variety of outreach mechanisms have been identified that will improve general awareness of the Coachella Valley IRWM program and provide means for all interested parties to stay engaged during the planning process and plan implementation.

Ongoing outreach is expected to involve announcing and posting agendas, summaries, handouts, and presentations of the Planning Partners meetings on the Coachella Valley IRWM website. Additionally, all meetings and materials will be announced to the Coachella Valley IRWM stakeholder email distribution list. Following are specific ongoing outreach activities that will take place in support of the Coachella Valley IRWM program process and plan implementation.

Correspondence

An electronic distribution list of stakeholders, interested parties and special subgroups has been developed and maintained. E-mail notices, the primary method of communication, will be sent to announce the availability of new materials on the Coachella Valley IRWM website, meeting minutes, and upcoming meetings.

Coordination and Outreach Meetings

In addition to general outreach activities, meetings and coordination of specific groups will take place including: CVRWMG, Planning Partners, tribal outreach and coordination, and DAC outreach and coordination. Below is a summary of the meetings that will take place in the planning and drafting of the IRWM Plan Update. The estimated timeframe for outreach meetings begins in January 2011 and extends through adoption of the Plan Update in December 2012.

Table 9: Summary of Outreach Meetings during IRWM Plan Update

	Frequency	Total Meetings
CVRWMG Program Management	Monthly	24
Planning Partners Coordination	Quarterly	8
DAC Outreach Coordination	Quarterly	8
Tribal Coordination	IRWM milestones	Up to 6
Public Workshops	IRWM milestones	Up to 6

Task 1-1: CVRWMG Program Management

The CVRWMG is responsible for ongoing management of the Coachella Valley IRWM program. The CVRWMG meets on approximately a monthly basis, generally in person. These meetings are critical to maintaining ongoing communication among CVRWMG members. A majority of the CVRWMG meetings are assumed to involve IRWM Plan Update activities. These meetings will be the primary opportunity for the Planning Partners and CVRWMG to provide in-kind contributions and assistance to the development of the IRWM Plan Update and related efforts. This task will involve continued support

of the CVRWMG, including preparation for, facilitation of, and participation in monthly CVRWMG meetings.

Deliverables

- Draft and final agendas, materials and handouts, and meeting notes for CVRWMG business meetings

Task 1-2: Planning Partners Coordination

Planning Partners meetings will take place on a quarterly basis. The agenda for these meetings will be set by the content for the development of the IRWM Plan Update and the needed materials, information, feedback and recommendations from the Planning Partners and Issue Group leaders (refer to Task 2 below). These meetings will be the primary opportunity for the Planning Partners to provide in-kind contributions and assistance to the development of the IRWM Plan Update and related efforts.

The Planning Partners would assist the development of draft Plan Update materials and feedback prior to their being provided to the broader stakeholder group and would require more significant time commitment than stakeholder participation. The Planning Partners would also receive and review all recommendations made by the Issues Groups on the DAC Water Quality Evaluation (see Task 2-1), the Salt and Nutrient Management Planning Strategy (see Task 2-2), the Integrated Flood Management Plan (see Task 2-3), and the Groundwater Elevation Monitoring Strategy (see Task 2-4). This task will involve continued support of the Planning Partners, including preparation for, facilitation of, and participation in quarterly Planning Partners meetings.

Deliverables

- Draft and final agendas, materials and handouts, and meeting notes for Planning Partners meetings.

Task 1-3: DAC Outreach and Technical Support

The goal of disadvantaged communities (DAC) outreach is to identify additional groups and obtain input that may be otherwise lacking from the IRWM planning and implementation efforts due to financial constraints. Coordinated with the DWR DAC Outreach Demonstration Program and with targeted outreach, the CVRWMG seeks to learn more about the major water-related concerns facing all DAC groups such that long-term implementation of the IRWM Plan is responsive to those needs. We will build upon the work conducted by the Disadvantaged Community Planning Group, established in 2007 to track the progress of DAC programs under Proposition 84 and with the DAC Outreach Demonstration Program, when initiated.

Communities targeted as part of the DAC outreach are groups that have historically been disproportionately impacted with respect to the development, implementation, or enforcement of environmental laws, regulations, and policies due to race, culture, or income. DAC organizations to be targeted during outreach for the Coachella Valley IRWM program include the following:

- California Rural Legal Assistance Inc./Foundation
- Clean Water Action
- Community Water Center
- Desert Alliance for Community Empowerment
- Desert Edge Community Council
- Environmental Justice Coalition for Water

- Natural Science Collaborative of the Desert Region
- Pueblo Unido CDC
- Poder Popular

Outreach Activities

DAC Outreach Meetings The CVRWMG will host quarterly meetings with DAC members to better understand their critical water supply and water quality needs and to identify potential solutions. Initial meetings will focus on bringing any groups that were not involved in the earlier efforts up to speed and informing all groups about recent activities and opportunities. Subsequent meetings will expand the methods of outreach in DAC/EJ communities, update those groups which may not be able to attend or participate in broader Planning Partner meetings, and develop IRWM planning efforts to meet the needs of each community. The DAC outreach meetings will facilitate the integration of disparate project needs into meaningful programs to better manage water supply and water quality in underserved areas.

Meetings will be held at times convenient for DAC representatives (recognizing that this may include evenings and/or weekends) and in different geographic locations within the Region. Meeting preparation will include public meeting notices and invitations, development and distribution of presentations, meeting handouts and minutes, and coordination of speakers/presenters.

Notices and Newsletters CVRWMG staff will work with community leaders to identify appropriate methods for notifying members of DAC communities of the current state of the Valley's water-related resources, the IRWM program, and solutions being generated to address their needs. These methods may include techniques such as notices at community gathering sites, multi-lingual newsletters, mailings, phone surveys, door-to-door surveys, or public meetings within the communities. The focus of these efforts will be to identify the critical needs of the targeted communities. Once identified, these critical needs will be translated into long-term targets for the IRWM Plan.

CVRWMG Coordination One or more CVRWMG partner(s) will be identified as the liaison with DAC organizations, so it is clear how coordination and communication will occur. Additionally, several DAC representatives have been designated as Planning Partners. Communication will be conducted mainly via telephone and email; however, office visits may be arranged as feasible. Through one-on-one communication, the CVRWMG will encourage participation by DAC representatives in IRWM public meetings.

Technical Support for DACs

Through the work recently completed for the IRWM Plan, critical issues and conflicts in DACs have been relatively well defined. However, DAC representatives often do not have the resources or technical capacity to develop project submittals that address those critical needs. The CVRWMG will work with those project sponsors to develop project scopes, budgets, and cost estimates to help ensure the DAC projects can be included in the IRWM Plan Update and future funding applications. This project development task includes planning and engineering services to achieve conceptual-level drawings, schematics, and cost estimates for up to 6 projects necessary to meet critical DAC needs. This effort will provide complete project information, but will not include CEQA or permitting efforts.

DAC Outreach Demonstration Program

The CVRWMG has identified the opportunity for more comprehensive efforts relating to DAC outreach and has submitted a DAC Outreach Demonstration Program proposal to DWR for potential funding. If funding is approved, the following additional goals will be achieved as part of that separate and parallel DAC Outreach effort:

- Establishment of a DAC Community Planning Group;
- At least five (5) DAC Workshops addressing specific community needs;
- DAC focused characterization, including seasonal populations;
- Flood control mapping in DAC areas;
- Planning and engineering support for DAC project development;
- Preparation of a DAC IRWM Plan Element; and
- DAC Outreach Demonstration Program White Paper.

Deliverables

- Draft and final agendas, materials and handouts, and meeting notes for DAC Outreach meetings.
- Notices and newsletters to communicate IRWM program activities.
- Technical support for project submittals (including conceptual level drawings, schematics, and cost estimates) for up to 6 DAC projects

Task 1-4: Tribal Outreach and Coordination

The goal of engaging the Valley's tribal governments is to better understand their critical water resources issues and needs. Through targeted outreach, the CVRWMG seeks to learn more about the major water-related concerns facing the tribes such that long-term implementation of the IRWM Plan is responsive to those needs. The following six Native American tribes in the region have been targeted during outreach for the IRWM program:

- Agua Caliente Band of Cahuilla Indians:
- Augustine Band of Mission Indians
- Cabazon Band of Mission Indians
- Morongo Band of Mission Indians
- Torres-Martinez Desert Cahuilla Indians
- Twenty-Nine Palms Band of Mission Indians

Additionally, meetings may include the Bureau of Indian Affairs or other tribal coordinating agencies or groups as appropriate.

Outreach Activities

Tribal Outreach Meetings The CVRWMG will host up to six (6) meetings with tribal representatives to better understand their critical water supply and water quality needs and to identify potential solutions. Tribal outreach meetings, however, will be based on the interest and availability of the tribal representatives. Tribal outreach meetings will inform the tribes about the IRWM program and its purpose, the local IRWM planning process, and upcoming funding opportunities. They will focus on clarifying the tribe's water resources issues and needs, and identifying integrated project concepts that address those needs. In addition, tribal outreach meetings will carefully review the different coordination and governance issues needed for tribes in the Coachella Valley IRWM region.

Tribal outreach meetings will be coordinated with the DAC outreach meetings, as appropriate for the issues being discussed. Individual meetings with tribal leaders and staff will also be held, if needed. Meetings will be held at times convenient for tribal representatives (recognizing that this may include evenings and weekends) and in different geographic locations within the region. Meeting preparation will

include public meeting notices and invitations, development and distribution of presentations, meeting handouts and minutes, and coordination of speakers/presenters.

Notices and Newsletters CVRWMG staff will work with community leaders to identify appropriate methods for notifying members of the tribes of the current state of the IRWM program and timing of project submittals. These methods may include techniques such as notices at community gathering sites, newsletters, or mailings. The focus of these efforts will be to identify the tribes' critical water resources needs and how those are represented in the IRWM Plan.

CVRWMG Coordination One or more CVRWMG partner(s) will be identified as the liaison with tribal governments, so it is clear how coordination and communication will occur. Additionally, several tribal representatives have been designated to serve on the Planning Partners. Communication will be conducted mainly via telephone and email; however, office visits may be arranged as feasible. Through one-on-one communication, the CVRWMG will encourage participation by tribal representatives in IRWM public meetings.

Deliverables

- Draft and final agendas, materials and handouts, and meeting notes for Tribal Outreach meetings.
- Notices and newsletters to communicate IRWM program activities.

Task 1-5: Public Involvement

Outreach to the general public and other entities not mentioned previously will take place through the following channels:

Public Workshops Up to six (6) public workshops will be conducted to enable stakeholders and the general public to help guide the actions and policies of the CVRWMG, as well as support the development of the proposed IRWM Plan. Workshop topics could include water supply reliability, groundwater, water quality, water conservation, habitat conservation, and flood control. Due to increased emphasis on stormwater/flood management at the State level, the CVRWMG will focus on engaging stormwater/flood management interests in the IRWM planning process to support enhancement of the flood control component of the IRWM Plan.

Public workshops may be held at variable times of day as needed and in different geographic locations within the Region. As appropriate, meetings will be located in disadvantaged areas to facilitate attendance by members of the local public. Workshop preparation will include public meeting notices and invitations, development and distribution of Issues Group presentations, meeting handouts and minutes, distribution of comment/feedback questionnaires, and compilation and summarization of public responses obtained during the workshops.

Website The Coachella Valley IRWM website (www.cvrwmg.org) will be updated on a monthly basis as a key component of the regional outreach program. The website will contain a wealth of information about the IRWM program, including: explanation of the IRWM program and funding opportunities; issues identification, goals and objectives, and other planning materials; the adopted IRWM Plan Update; information about potential IRWM projects to be included in Proposition 84 and 1E grant applications; information about the CVRWMG; Planning Partners and Issues Group meeting agendas, summaries, and presentations; and other helpful links.

Newsletters Information regarding upcoming meetings may be relayed to the general public via fliers posted at community facilities, city and county office buildings, and announcements published in local newspapers and organizational newsletters. An electronic newsletter may be produced quarterly and at major milestones of the IRWM program, as needed to ensure stakeholders are being engaged.

Press Releases Local newspapers will be encouraged to provide coverage of meetings or to provide updates on the progress of IRWM planning efforts. Media relations provide a credible and economic approach to achieving widespread dissemination of key project information. Studies show that information presented to the public through a third party, such as the media, is more readily believed by the public, as opposed to advertising or other methods of information coming directly from the source. Primary press outreach will be associated with kickoff and early awareness efforts early in the project. Press releases may be released quarterly and at major milestones of the IRWM program, including an open Call for Projects and IRWM Plan Update approval, but may be issued at other important junctures.

On-Line Project Database To facilitate communications among planners and project proponents, the CVRWMG will update our on-line project database aimed at providing universal access to information about IRWM projects in the Coachella Valley region. The project database allows project proponents and other interested parties to add, edit, and review project proposals throughout the region. This tool, coupled with the Public Workshops, is intended to connect stakeholders with one another to identify and enhance synergies among projects, hopefully leading to better integration and stronger partnerships. The on-line project database will also enhance CVRWMG efforts to inform the general public about "what is IRWM" through concrete project examples.

Deliverables

- Draft and final agendas, materials and handouts, and meeting notes for Public Workshops
- Monthly website updates on IRWM activities
- Notices and newsletters to communicate IRWM program activities
- On-line project database to communicate IRWM project concepts

Task 2: Technical Evaluations

The following tasks comprise several technical evaluations essential for water resources management within the Coachella Valley. Implementation of these technical studies will continue the momentum gained by preliminary development of the IRWM Plan in 2010.

Task 2-1: DAC Water Quality Evaluation

The Coachella Valley Groundwater Basin (CVGWB or basin) is of critical importance to the local community – it provides the majority of water used in the Valley, including nearly all that used for domestic purposes. Elevated concentrations of fluoride, arsenic, chromium, uranium, nitrate, and TDS are present locally in groundwater. A number of DACs in the Valley are concerned about the quality of their drinking water supplies.

The State of California defines a Disadvantaged Community (DAC) as a community with an annual median household income (MHI) that is less than 80% of the Statewide MHI. Using this standard, four of the nine cities in the Coachella Valley IRWM Region would qualify as DACs: Cathedral City, Coachella, Desert Hot Springs, and Palm Springs. Smaller DACs are present in other areas of the Valley. Because this is their only source of water, these communities would like this situation to be properly evaluated.

To best manage the local groundwater resource to meet needs of all Valley residents, the CVRWMG will assess groundwater quality issues in and around DAC areas. This scope of work outlines the investigation, which will identify constituents with concentrations that are near or exceed drinking water standards in DAC areas. This evaluation is an essential component of the IRWM Plan Update because it addresses one of the most critical issues identified by the CVRWMG and Planning Partners. The DAC Water Quality Evaluation will be incorporated into the IRWM Plan Update.

Subtask 2-1-1: DAC Issues Characterization

The CVRWMG shall establish an Issues Group to guide development of the DAC Water Quality Evaluation. The Issues Group shall be nominated by the CVRWMG and may include Planning Partners and other technical experts. The Issues Group may consist of those whose constituencies are DACs impacted by groundwater quality issues. The CVRWMG shall identify stakeholders and develop a contact list.

The CVRWMG shall lead up to four meetings with the Issues Group to discuss and develop the DAC Water Quality Evaluation. The meetings are designed to coincide with key data collection, review, and report efforts. At the kick-off meeting, participants will discuss the location and extent of DACs. A map showing DAC areas in the Valley will be prepared along with a table summarizing key attributes of each, including number of residents, number of dwellings and commercial structures, current source of water, and method of wastewater disposal. This information will be discussed in a brief memo distributed to Issues Group participants prior to meeting. Study areas will be finalized during a subsequent meeting. As many as 10 areas that appear to be under the greatest threat of water quality issues will be targeted for further study.

Additional meetings will address results of the groundwater quality data compilation and review. This discussion will be held after available water quality and well data have been compiled and reviewed. The intent of this meeting is to gain alignment on the severity and extent of the issue and agree on how best to assess and monitor water quality issues going forward. Based on results of the previous meeting, a recommended monitoring plan will be developed. The intent of this monitoring plan is to allow for better characterization of local groundwater quality issues, and to allow for an ongoing assessment of DAC water quality issues. A final monitoring program will be presented and discussed during the final meeting.

This task will involve meeting notification, agendas presentations and materials, sign-in, and notes. CVRWMG shall provide meeting materials, including agenda and draft documents, to the stakeholders at least one week in advance.

Deliverables:

- Draft and final memo defining DAC areas
- Draft and final agendas, materials and handouts, and meeting notes for up to four Issues Group meetings on the DAC Water Quality Evaluation

Subtask 2-1-2: Compile and Review Water Quality Data for DAC Areas

Publically-available data regarding well locations, well construction details, water levels, and water quality in DAC areas shall be obtained and housed in a Geographic Information System (GIS). CVRWMG shall obtain relevant data for the DAC areas from member agencies, and is assumed to include the full spectrum of Title 22 drinking water standard parameters. Additional relevant information will also be uploaded into the GIS, such as location of known areas of groundwater contamination (from CDPH and RWQCB records), and areas that are unsewered (as part of the Salt and Nutrient Management Plan work).

Basic statistics shall be used to summarize compiled water quality data, including: dates of first and most recent analytical results; number of reported results; maximum, minimum, and average concentrations; and number of exceedences of contaminant limits. Chemographs and depth-specific water quality maps shall be prepared for as many as five select constituents. The GIS will be used to identify potentially vulnerable DAC areas based on known areas of groundwater contamination, location of unsewered areas, and areas served by shallow supply wells.

Deliverables:

- Water quality data request
- Summary memo with maps, figures, and tables summarizing groundwater quality data
- Presentation for CVRWMG agencies regarding DAC water quality issues

Subtask 2-1-3: Prepare DAC Water Quality Evaluation

Based on results of prior tasks, a DAC Water Quality Evaluation shall be prepared that outlines the current state of the Valley's knowledge. The evaluation shall incorporate a DAC Groundwater Quality Monitoring Plan to fill data gaps and provide ongoing assessment of groundwater quality issues in DAC areas. Focus shall be paid to using existing wells to the extent possible; potential benefits of new monitoring wells will be discussed. Areas near and down gradient of identified poor water quality will be highlighted. The DAC Water Quality Evaluation shall include recommendations regarding analytes, frequency of sampling, and how sampling frequency and number of wells may be modified through time as data are collected. The draft plan will be discussed with the Issues Group for comment before being finalized.

Deliverables:

- Draft and final DAC Water Quality Evaluation, incorporated into the IRWM Plan Update

Task 2-2: Salt and Nutrient Management Planning Strategy

The State of California adopted the Recycled Water Policy (Policy) that requires Salt and Nutrient Management Plans (SNMPs) be developed to manage salts, nutrients, and other significant chemical compounds on a watershed- or basin-wide basis. The Policy specifies that SNMPs are to be developed in a cooperative and collaborative manner among water and wastewater agencies and other salt/nutrient stakeholders. The SNMPs are intended to help streamline permitting of new recycled water projects while ensuring compliance with water quality objectives and protection of beneficial uses.

Because the region is so reliant on groundwater supply and has prioritized expansion of their recycled water systems, compliance with the new Policy will be critical for water management in the future. Given its role as a regional water planning program, the IRWM program is an appropriate and effective body to lead development of a planning strategy for the region.

Framework for Salt and Nutrient Management Planning

The CVRWMG shall establish an Issues Group to develop recommendations for how Coachella Valley stakeholders can meet Policy requirements. The Issues Group shall be nominated by the CVRWMG and may include Planning Partners and other technical experts. The Issues Group may consist of those whose activities and operations may impact salt and nutrient management in the Basin, including: agricultural interests, private well owners, environmental groups, and RWQCB staff. The CVRWMG shall identify stakeholders and develop a contact list.

The CVRWMG shall lead up to four meetings with the Issues Group to discuss and develop an implementation framework for a Coachella Valley SNMP. Topics of discussion shall include an overview of the Policy and relevant drivers, the process for SNMP development and SNMP elements, constituents that may be assessed, and an overview of current understanding regarding salt and nutrient sources in the basin. This task will involve meeting notification, agendas presentations and materials, sign-in, and notes. CVRWMG shall provide meeting materials, including agenda and draft documents, to the stakeholders at least one week in advance.

Meetings shall be facilitated to result in key program decisions, such as how source identification, salt loading, groundwater data collection, anti-degradation analysis, development of Best Management Practices (BMPs), and monitoring shall occur. The outcomes of this Issues Group shall be a recommended Planning Strategy, laying out the steps to be taken by regional stakeholders in developing a SNMP. The Planning Strategy shall address data management for the SNMP, including who would be responsible for collecting and maintaining the data, data security, and other issues of concern to participants. The Issues Group shall present the Planning Strategy to RWQCB staff at their offices and facilitate comment response and incorporation to arrive at an approvable SNMP.

Deliverables:

- Draft and final agendas, materials and handouts, and meeting notes for up to four Issues Group meetings on the Salt and Nutrient Management Planning Strategy
- Draft and final Salt and Nutrient Management Planning Strategy, incorporated into the IRWM Plan Update
- Presentation to RWQCB staff on the Planning Strategy (assume one-month review)

Task 2-3: Integrated Flood Management Planning

Enhanced integration of flood management issues would benefit the Coachella Valley IRWM region. Although Coachella Valley receives only an average 3.6 inches per year of rainfall, flooding is still a problem in some areas of the region[2]. In this desert environment with its intense but infrequent storms, integrated flood management is particularly important because desert flash flooding moves quickly from one community to the next and flood management approaches that work in other parts of California may not be suitable here.

The Coachella Valley IRWM Plan is an ideal vehicle for improving and integrating flood management in the region and providing a starting point for regional multi-benefit flood control project that also protect water quality, enhance local groundwater supplies through recharge, and protect or improve ecosystem functions and wildlife habitat.

Background

Within the Coachella Valley IRWM region, RCFCWCD and CVWD are the primary flood control districts. They operate and maintain a series of regional flood control facilities throughout the Valley. These facilities drain to the Salton Sea. Local cities and the County of Riverside manage localized urban drainage systems that drain to these facilities.

The back bone of this system is the Region's 49-mile Whitewater River/Coachella Valley Stormwater Channel, which carries surface runoff to the Salton Sea. West of Washington Street, it's called the Whitewater River Stormwater Channel (WRSC); east of Washington Street, it's called the Coachella Valley Stormwater Channel (CVSC). Local cities and the County divert runoff from storm events to the WRSC.

The WRSC and its tributary channels protect the Valley cities from Palm Springs to Coachella from flooding. However, there are still several areas of the Coachella Valley IRWM Region that lack flood control facilities and are vulnerable to devastating alluvial and riverine flooding. These include the community of Thousand Palms, the Oasis area, Highway 111 between Palm Springs and Cathedral City, and areas along the CVSC South of Avenue 52. USACE is proposing a system of levees to go east into

[2] Water Quality Control Plan, Colorado River Basin – Region 7, California Regional Water Quality Control Board, State Water Resources Control Board October 2005, p. 1-8

the Rio del Sole to Warner. Controlling flooding in the East Valley including the City of Desert Hot Springs is also a priority.

Subtask 2-3-1: Catalog Existing Plans and Needs

The CVRWMG shall establish an Issues Group to develop recommendations for how Coachella Valley stakeholders can implement integrated flood management. The Issues Group shall be nominated by the CVRWMG and may include Planning Partners and other technical experts. The Issues Group may consist of those whose activities and operations may be impacted by flooding in the Valley, including: cities, public utilities, environmental groups, and DAC representatives. The CVRWMG shall identify stakeholders and develop a contact list.

The CVRWMG shall lead up to four meetings with the Issues Group to discuss and develop an Integrated Flood Management Plan. Topics of discussion shall include how the Coachella Valley region can practice integrated flood management, including better emergency preparedness and response, improved flood protection, improved stormwater quality, and enhanced floodplain ecosystems. This task will involve meeting notification, agendas presentations and materials, sign-in, and notes. CVRWMG shall provide meeting materials, including agenda and draft documents, to the stakeholders at least one week in advance.

To facilitate this discussion, a list of all existing flood management plans of RCFCWCD, CVWD, the municipalities or other local entities will be assembled. Each plan will be reviewed and information about the plan's applicability, breadth and currency. Existing surface water flow/flood prediction models will also be cataloged and reviews as part of this task.

Using the review of existing flood management plans as a starting point, the CVRWMG will work with the Issues Group to understand and document existing flood protection needs. Personal interviews will be conducted with staff from the RCFCWCD, CVWD, the municipalities and other local agencies/groups in order to understand flood protection needs that may not be adequately addressed in existing plans. Particular attention will be paid to documenting the flood protection needs of DACs.

Deliverables:

- Draft and final agendas, materials and handouts, and meeting notes for up to four Issues Group meetings on the Integrated Flood Management Plan
- Draft and final matrix of existing flood management plans
- Draft and final memo of flood protection needs

Subtask 2-3-2: Develop a Regional Vision for Multi-Benefit Flood Protection

Working with the Planning Partners and other stakeholders, the CVRWMG will develop a regional vision for what, how, and where multi-benefit flood project projects shall be developed. This vision shall include concrete examples from other IRWM regions within the State.

Building on the regional vision, the CVRWMG will develop a methodology to catalog and prioritize flood projects to be considered for IRWMP funding. This methodology will follow the methodologies used for ranking other IRWM projects but will also consider issues specific to flood management such as flood frequency, flood severity as well opportunities for benefits beyond flood protection including groundwater recharge, water quality protection, and habitat enhancement.

Deliverables:

- Draft and final vision for multi-benefit flood protection
- Draft and final memo of methodology to prioritize flood projects

Subtask 2-3-3: Facilitate Regional Participation in Flood Management

This task is aimed at improving regional coordination related to floodplain management and flood protection programs, including participation in the National Flood Insurance Program's (NFIP) Community Rating System (CRS), coordination with the Municipal Separate Storm Drain System (MS4) copermittees, and

The NFIP CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS: 1) to reduce flood losses, 2) to facilitate accurate insurance rating, and 3) to promote the awareness of flood insurance. At present, the City of Palm Springs is the only city in the IRWM region participating in the CRS[3]. The CVRMG will educate the municipalities about the benefits of CRS and the steps needed to obtain a CRS rating. The CVRWMG will also assess whether a region-wide program to assist cities with participation in the CRS program would be an appropriate project to be included within the IRWM Plan Update.

As part of this task, the CVRWMG will assess opportunities for coordination of flood control efforts and stormwater quality efforts, particularly with regard to low-impact development (LID). Stormwater discharges from RCFCWCD, CVWD, and the incorporate cities in the region (Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs and Rancho Mirage) are regulated under a National Pollutant Discharge Elimination System MS4 permit (*Order No. R7-2008-0001; NPDES No. CAS617002*). The permit and the corresponding Riverside County Whitewater River Region Stormwater Best Management Practices Design Handbook (RCFCWCD 2009) provide criteria for the use of LID and on-site stormwater treatment practices. The extent to which these practices can be employed and expanded upon to assist with flood protection efforts will be evaluated within the IRWM Plan Update.

Finally, the Alluvial Fan Task Force *Findings and Recommendations Report* (DWR 2010a)[4] and *The Integrated Approach For Sustainable Development On Alluvial Fans* report (DWR 2010b) will be reviewed and methods for incorporating the findings of this work into regional integrated flood management will be developed. As appropriate, other statewide flood protection initiatives will also be assessed for their applicability to the region.

Deliverables:

- Draft and final materials promoting involvement in CRS
- Draft and final memo on coordination between flood protection and stormwater quality
- Draft and final memo on implementing State flood initiatives

Subtask 2-3-4: Compile Integrated Flood Management Plan

The CVRWMG will compile the work from all subtasks above into a comprehensive Integrated Flood Management Plan for the Coachella Valley. This comprehensive plan will lay out the current state of the Valley's flood protection facilities, local stakeholder's vision for integrated flood planning, and recommendations for participating in CRS and implementing various State programs. This

[3] City of Palm Springs website, "Flood Insurance Information", http://www.ci.palm-springs.ca.us/index.aspx?page=477

[4] Department of Water Resources, Alluvial Fan Task Force, *Findings and Recommendations,* July 2010

[4] Department of Water Resources, Alluvial Fan Task Force, *The Integrated Approach For Sustainable Development On Alluvial Fans,* July 2010

comprehensive plan will assist DWR with development of the FloodSAFE Strategic Plan (http://www.water.ca.gov/floodsafe/plan/).

Deliverables:

- Draft and final Integrated Flood Management Plan, incorporated into the IRWM Plan Update

Task 2-4: Groundwater Elevation Monitoring Strategy

Recent legislation by the State of California (SBX7-6) requires agencies to monitor groundwater level elevations in local basins and report results to DWR. The monitoring programs must be in place by January 1, 2012. The intent of this legislation is to better manage the groundwater resources of the State during both normal and drought years. Local agencies can apply to DWR to be the entity responsible for developing and implementing the monitoring and reporting program, in which case they need to notify the State of this intent by January 1, 2011. DWR will work cooperatively with these entities to develop an appropriate program. Agencies may also choose to allow DWR to assume monitoring responsibilities, in which case they would be ineligible to receive water grants or loans awarded or administered by the State. The CVRWMG may choose to be the entity responsible for developing and implementing the groundwater level elevation monitoring program for the CVGWB.

Background

The CVGWB is of critical importance to the local community. Almost all domestic water served by the local water purveyors is obtained locally from wells drilled into the Valley's vast groundwater basin. Despite the large amount of artificial groundwater recharge, the local basin has not been in balance since the early 1900's. The overdraft was estimated to be about 137,000 AFY in 1999, with a cumulative overdraft of nearly 4.8 million acre-feet between 1936 and 1999 (CVWD 2002). Recharge to the groundwater basin is attributed to surface runoff and subsurface inflow. Natural recharge in the area is estimated to be only a fraction of the annual pumping – about 50,000 AFY. The bulk of groundwater recharge takes place through four artificial recharge areas: Whitewater Spreading Area, Mission Creek Spreading Facility, Thomas E. Levy Recharge Facility, and Martinez Canyon Pilot Recharge Project.

Groundwater levels have been strongly influenced by importation of Colorado River water, which began in 1949 to help meet agricultural irrigation demands in the southern portion of the Valley. Water levels in the northern portion of the Valley have been influenced by artificial recharge of Colorado River water in this area that began in 1973. Water levels in portions of the basin have fluctuated as much as 100 feet due to pumping and recharge activities. Water levels are currently near or at historic lows in some area, leading to concerns about land subsidence.

Framework for Monitoring Plan and Reporting

SBX7-6 is a new program that requires DWR to work cooperatively with local agencies to develop groundwater elevation monitoring and reporting programs. The first task of this work effort is to align expectation between DWR and CVRWMG regarding water level monitoring needs for the Basin. DWR will be contacted to initiate this process and obtain up-to-date program guidelines and expectations. The CVRWMG will hold a meeting to discuss these expectations and decide how they can best be met.

The CVRWMG will then establish an Issues Group to develop recommendations for how Coachella Valley stakeholders can comply with the groundwater elevation monitoring requirements. The Issues Group shall be nominated by the CVRWMG and may include Planning Partners and other technical experts. The Issues Group may consist of those whose activities and operations may impact groundwater elevations, including: agricultural interests, private well owners, environmental groups, and RWQCB staff. The CVRWMG shall identify stakeholders and develop a contact list.

The CVRWMG shall lead up to four meetings with the Issues Group to discuss and develop an implementation framework for an SBX7-6 compliant groundwater elevation monitoring program. Topics of discussion shall include an overview of the program guidelines and expectations as explained by DWR, an overview of known groundwater monitoring in the Valley, and population of a regional data management system. This task will involve meeting notification, agendas presentations and materials, sign-in, and notes. CVRWMG shall provide meeting materials, including agenda and draft documents, to the stakeholders at least one week in advance.

Meetings shall be facilitated to result in consensus about how a regional groundwater elevation monitoring program would be implemented, who would be the responsible agency, where and how the data would be managed and stored, and other relevant topics. The outcomes of this Issues Group shall be a recommended Monitoring Strategy, laying out the steps to be taken by regional stakeholders in developing an SBX7-6 compliant groundwater elevation monitoring program.

Deliverables:

- Memo summarizing discussions with DWR
- Draft and final agendas, materials and handouts, and meeting notes for up to four Issues Group meetings on the Groundwater Elevation Monitoring Strategy
- Draft and final Groundwater Elevation Monitoring Strategy, incorporated into the IRWM Plan Update

Task 3: IRWM Plan Update

Building on the work completed in Tasks 1 and 2, the following tasks comprise activities necessary to physically rewrite and produce the IRWM Plan Update.

Task 3-1: Refine Plan Goals, Objectives, and Priorities

As the IRWM Plan Update is developed, a detailed refinement of the Region's goals and objectives may be necessary. As the technical evaluations in Task 2 move forward, the CVRWMG will incorporate any new information learned about the Valley's water management systems into the IRWM Plan. This may include clarification of critical water supply or water quality issues and/or incorporation of the new planning strategies into the Plan framework.

Based on this work, the CVRWMG and Planning Partners will refine the Plan goals and objectives to guide the region during the next planning horizon. Additionally, the CVRWMG and Planning Partners shall revisit the short- and long-term priorities laid out in the IRWM Plan to determine if the new information and/or changing regional conditions or regulatory requirements results in different priorities. The CVRWMG will utilize meetings with the Planning Partners, DAC representatives, tribes, and general public under Task 1 to discuss and refine the IRWM Plan Update goals, objectives, and priorities.

Deliverables

- Draft and final IRWM Plan Update goals and objectives
- Draft and final IRWM Plan Update regional priorities

Task 3-2: Evaluate and Report Plan Performance

The IRWM Plan currently under development establishes a mechanism to evaluate and report IRWM Plan performance. An annual reporting process will be used to evaluate the region's progress on fulfilling the short-term priorities (i.e., program implementation), as well the region's progress on implementing the identified water management projects (i.e., project implementation). The annual reporting will contain

criteria used to evaluate the progress of implementation projects in meeting the IRWM Plan objectives. This will ensure that the CVRWMG is efficiently making progress towards meeting the objectives in the IRWM Plan, the CVRWMG is implementing projects listed in the IRWM Plan, and each project in the IRWM Plan is monitored to comply with all applicable rules, laws and permit requirements.

The annual reports will be short and concise summaries that can be used to communicate Plan performance to stakeholders and the CVRWMG governing bodies. The annual reports will be delivered in both print and electronic copy to reach as many stakeholders as possible. The CVRWMG will utilize meetings with the Planning Partners, DAC representatives, tribes, and the general public under Task 1 to discuss and present Plan performance.

Deliverables

- Draft and final IRWM Plan Annual Reports (2011 and 2012)

Task 3-3: Climate Change Analysis

The CVRWMG will update the climate change analysis in the IRWM Plan based on DWR's forthcoming climate change guidelines. The scope of work anticipates preparation of an evaluation of the adaptability of water management systems in the region to climate change, including water supply, wastewater, and flood control systems. Further, the IRWM Plan Update will contain a gross GHG inventory of the water management systems in the region, to help define the region's baseline in line with DWR requirements. Project-level GHG emissions assessments will be collected from California Environmental Quality Act (CEQA) and California Air Resources Board (CARB) documentation, where available. GHG emissions for all other regional facilities will be estimates based on industry standards.

As climate change and its impacts are better understood in relation to the Valley's water management system, this effort will adapt the project selection and prioritization processes in the IRWM Plan to emerging understanding of the effects and implications of climate change, as well as new understand of mitigation and GHG reduction strategies.

Deliverables

- Draft and final climate change component for the IRWM Plan Update

Task 3-4: Update Implementation Framework

Based on the region's inaugural year as an IRWM region, the CVRWMG will work with the Planning Partners to update the Plan's Implementation Framework (Chapter 8 of the IRWM Plan). Discussions will be facilitated to ensure that consensus is reached on how the region is to move forward as an established IRWM program. Topics that may be addressed include:

- Implementation of priority projects that support the region's IRWM goals and objectives
- Refining the long-term governance and funding structure to guide the ongoing development and implementation of the region's IRWM program
- Completing a needs assessment and developing recommendations for addressing existing technical deficiencies in the region through additional technical studies

Deliverables

- Draft and final DAC implementation framework for the IRWM Plan Update

Task 3-5: Prepare IRWM Plan Update

As discussed previously, a number of technical evaluations are planned for the region – including a DAC Water Quality Evaluation, Salinity and Nutrient Planning Strategy, Integrated Flood Management Plan, and Groundwater Elevation Monitoring Strategy. It will be necessary to include the results of these evaluations in the IRWM Plan Update. Further, revisions to the IRWM goals and objectives, plan metrics, climate change analysis, and implementation framework will need to be incorporated into the IRWM Plan Update.

The CVRWMG will review prepare a Draft IRWM Plan Update for review and approval by the Planning Partners and other regional stakeholders. Based on the comments reviewed from the Planning Partners and general public, the CVRWMG will prepare a Final IRWM Plan Update. Following one round of revisions based on final comments, the CVRWMG will prepare a Final IRWM Plan Update for presentation to the CVRWMG governing bodies. All five CVRWMG agencies will adopt the IRWM Plan Update within two years of Planning Grant contract execution.

Deliverables

- Draft and Final IRWM Plan Update